Survey of Road User Knowledge

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ABSTRACT

The Ontario Ministry of Transportation, Transportation Regulation Development Branch, retained Environics Research Group to conduct a survey among a representative sample of the province's road users. In the spring of 1989, Environics randomly selected, then interviewed, 1,003 Ontarians (weighted N=1,002), 15 years of age and older, from across the province. The sample was designed to obtain information from specific road user groups -- drivers, cyclists and pedestrians.

The objective of this research was to establish a baseline measurement of the public's knowledge of safe road use practices. Given legislative changes, improvements in transportation technology and developments in road use techniques, it was critical to obtain an accurate reading of the current level of road use knowledge.

Ontario's drivers generally are well-informed about the rules of the road and the correct ways to deal with commonly encountered situations. There are moderate to high levels of knowledge regarding proper intersection behaviour, the meanings of different traffic signals, proper procedures when approaching a school bus, freeway driving, and the use of seatbelts. Drivers in Ontario are less well-informed about how to estimate a safe distance when following behind another vehicle and the correct method by which to pass a slower-moving vehicle on a two-lane highway.

There are moderate to high levels of road use knowledge among Ontario's cyclists. Young cyclists, however, have lower levels of knowledge about safe cycling than older people. In particular, young cyclists exhibit a knowledge gap regarding the correct way to negotiate intersections, and the proper hand and arm signals to use when turning.

As with other road users, pedestrians are generally well-informed about safe road use procedures. Nevertheless, there are areas in which knowledge levels can be improved. For example, few respondents report that, when crossing a roadway where there are no intersections or crosswalks, they should position themselves where they are clearly visible to motorists.

ENQUÊTE SUR LES CONNAISSANCES DES USAGERS DE LA ROUTE DE L'ONTARIO

RÉSUMÉ

La Direction de l'élaboration des règlements sur les transports du ministère des Transports de l'Ontario a demandé à Environics Research Group d'effectuer une enquête auprès d'un échantillon représentatif des usagers de la route de la province. Au printemps 1989, Environics a constitué un échantillon aléatoire de 1 003 Ontariens de toute la province (pondération N=1 002), âgés de 15 ans ou plus et appartenant à des groupes précis d'usagers de la route : automobilistes, cyclistes et piétons.

Il s'agissait de mesurer la connaissance qu'a le public des règles de la circulation. Étant donné les modifications qu'a subies la législation, les améliorations apportées par la technologie des transports et les progrès des techniques de la circulation, il était capital d'obtenir une mesure précise du degré actuel de connaissance des règles de la circulation.

Les automobilistes sont généralement bien au courant des règles de la circulation et des réactions indiquées dans les situations les plus courantes. En ce qui concerne la façon d'aborder les carrefours, la signification de divers panneaux de signalisation, les consignes à appliquer à l'approche d'un autobus scolaire, la conduite sur autoroute et l'usage des ceintures de sécurité, ils témoignent d'un niveau de connaissance moyen à élevé. Par contre ils sont moins bien informés de la façon d'évaluer les distances lorsqu'on suit un autre véhicule et de la méthode correcte de dépassement d'un véhicule lent sur une route à deux voies.

On trouve un niveau de connaissance des règles de la circulation moyen à élevé chez les cyclistes de l'Ontario. Les jeunes cyclistes, cependant, sont moins au fait des consignes de sécurité que les personnes plus âgées. On trouve en particulier, chez eux, des lacunes en ce qui concerne la bonne façon d'aborder les carrefours et les signaux de la main à faire lors d'un virage.

Quant au troisième groupe, les piétons, ils sont généralement bien au courant des règles de sécurité. Il y a néanmoins des domaines où leur niveau de connaissance nécessite une amélioration. Par exemple, peu de répondants ont su dire que, lorsqu'on traverse une chaussée à un endroit où il n'y a ni croisement ni passage protégé, on doit se placer de façon à être bien visible pour les automobilistes.

EXECUTIVE SUMMARY

Environics Research Group was retained by the Ontario Ministry of Transportation, Transportation Regulation Development Branch, to conduct a survey among a representative sample of the province's road users. In the spring of 1989, Environics randomly-selected, then interviewed, 1,003 Ontarians (weighted N=1,002), 15 years of age and older, from across the province. The sample was designed specifically to facilitate obtaining information from subgroups of drivers, cyclists and pedestrians.

The specific objective of this research was to establish a baseline measurement of the public's knowledge of safe road use practices. Given legislative changes, improvements in transportation technology and developments in road use techniques, it was critical to obtain an accurate reading of the current level of road use knowledge. Findings from this survey that reveal gaps in knowledge are to feed into remedial public education campaigns and programmes.

Drivers

In total, 842 licensed drivers were questioned about their knowledge of road use practices. Although the vast majority of drivers in Ontario hold a G-class license, holders of other license classes also were represented in this study.

For the most part, Ontario's drivers are well-informed about the rules of the road and the correct ways to deal with commonly encountered situations. There are moderate to high levels of knowledge regarding what to do at intersections, what different traffic signals mean, what to do when approaching a school bus, how to drive on freeways, and when seatbelts are required.

Cyclists

Four hundred and forty-nine (449) cyclists, 15 years of age and older, answered questions about their knowledge of safe cycling practices. There are moderate to high levels of road use knowledge among Ontario's cyclists.

Young cyclists generally have lower levels of knowledge about safe cycling than older individuals. In particular, young cyclists exhibit a knowledge gap regarding the correct way to negotiate intersections and the proper hand and arm signals when turning.

It appears that at least some knowledge of safe cycling practices is a result of actually using the road system.

Pedestrians

Due to the fact that all survey respondents are defined as pedestrians, it was necessary to select randomly a subsample of individuals to answer questions about pedestrian safety. In total, 615 individuals were asked the pedestrian safety questions. This included a group of exclusive pedestrians.

As with other road users, pedestrians are generally well-informed about safe road use procedures. Nevertheless, there are three areas in which knowledge levels can be improved. Few respondents state that, when crossing a roadway where there are no intersections or crossings, they should position themselves where they are clearly visible to motorists. Pedestrians are not always aware that they should point when using a pedestrian crossing. Some pedestrians believe that they can cross an intersection when they are facing a flashing green traffic signal instead of waiting for a solid green signal.

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1.0 INTRODUCTION

1.1 GENERAL RESEARCH OBJECTIVES

Environics Research Group was retained by the Ontario Ministry of Transportation, Transportation Regulation Development Branch, to undertake a province-wide study to measure the levels of road use knowledge among drivers, cyclists and pedestrians. In total, 1,003 Ontarians (weighted N=1,002), 15 years of age and older, were surveyed in the Spring of 1989.

This research project was designed to provide a baseline measure of the public's current knowledge of safe road use procedures. Given the range of legislative changes, developments in transportation technology, and improvements in road use techniques, there is good reason to believe that at least some road users may not have kept pace. The principal purpose of this research, then, is to locate the specific areas of road use knowledge in which gaps have developed.

Finding the gaps in road use knowledge is important because without filling these gaps, road users will be guessing, perhaps incorrectly, about correct, safe procedures. Knowledge is a necessary first step to correct practice. Road users, however, may be functioning without the benefit of such knowledge, or may choose to disregard this knowledge when travelling.

By locating the knowledge gaps, public education programmes developed by the Ministry of Transportation can be designed for and targeted to knowledge-deficient groups. The research findings will identify these groups by demographic characteristics such as age, gender, education, residence and language. Knowledge-deficient motorists will be further classified by license class, driving experience and reasons for travelling.

1.2 SPECIFIC INFORMATION

The survey was designed to measure knowledge of road use among three specific segments of the road-using public:

1 - Drivers;

2 - Cyclists; and

3 - Pedestrians.

The specific questions asked to each road user group deal with situations in which road users are seen to be at higher risk of an

accident. Each situation presented to respondents has been selected by road safety experts as potentially unsafe.

Drivers

- Knowledge of the types of vehicles that can be driven by a particular license class;
- Knowledge of correct intersection behaviour specifically regarding traffic signals and right-of-way;
- Knowledge of correct freeway driving practices;
- Knowledge of how to pass a slower moving vehicle on two-lane highways;
- General knowledge about: 1) handling an emergency situation; 2) sharing the road with motorcyclists; 3) seatbelt use; 4) speed limits; 5) night lighting; 6) schools buses; and, 7) insurance coverage for suspended drivers and drivers who have been drinking and driving.

Cyclists

- Knowledge of whether a cyclist must obey the same rules of the road as a motorist;
- Knowledge of correct intersection behaviour including: 1) traffic signals; 2) hand and arm signals; 3) right-of-way; and, 4) pedestrian crossings.

Pedestrians

- Knowledge of correct procedures to cross roadways at intersections, between intersections and at pedestrian crossings; and,
- Knowledge of where to walk alongside the roadway.

As well, the study was designed to examine how people, in particular drivers, acquire knowledge of correct road use. This would include formal training, as well as information obtained through safe road use promotions.

Ultimately, the goal of this study is to locate differences and gaps in road use knowledge among the public and to assist in finding the ways by which to fill in these knowledge gaps.

2.0 METHODOLOGY

2.1 INTERVIEWS

The interviewing was conducted in two phases from Environics' central location computer-assisted telephone interviewing (CATI) facility in Toronto. In the first phase of 753 interviews, telephone numbers were drawn randomly from across the province using the Waksberg-Mitofsky procedure. This method of sample selection is equivalent to random digit dialling (RDD).

At the conclusion of the first phase of interviewing, we analyzed the distribution of drivers, cyclists and pedestrians with special emphasis on the number of respondents in each of the driver license classes. In order to augment the numbers in specific license classes, individuals with these licenses were selected randomly from the master driver record file of the Ministry. Subsequently, these individuals were telephoned and interviewed as part of the second fieldwork phase.

2.2 WEIGHTING OF SAMPLE

The initial distribution of the survey sample was structured to reflect the distribution of license types as presented in Ministry of Transportation statistical information. At the analysis stage, the data were weighted to correct for oversampling during the second phase of interviewing. The total weighted sample is representative of the population of Ontario, and reflects the fact that, while 85 percent of the population are eligible for licensing, only 84 percent actually hold an endorsement.

(For further details with regard to research methodology, please see Appendix 1: Methodology).

TABLE 1
PERCENTAGE OF ONTARIANS HOLDING A VALID DRIVER'S LICENSE
(AGE 16+)

	Ontario License %	Non-Ontario License %
Metro Toronto	80	2
Eastern Ontario	85	5
Central East	84	0
Central West	87	1
Western Ontario	87	0
Northern Ontario	76	1
TOTAL ONTARIO	85	1

TABLE 2
PERCENTAGE OF ONTARIANS RIDING A BICYCLE ON STREETS OR ROADS
(AGE 15+)

	Riding Bicycle %
Metro Toronto	37
Eastern Ontario	45
Central East	46
Central West	49
Western Ontario	42
Northern Ontario	53
TOTAL ONTARIO	45

3.0 DRIVERS, CYCLISTS AND PEDESTRIANS

3.1 DISTRIBUTION OF ROAD USERS IN THE ONTARIO POPULATION

3.1.1 Drivers

In total, 85 percent of the population of Ontario, 15 years of age or older, are licensed to drive a vehicle (the youngest age for holding a license is 16 years of age). Eighty-four percent hold a valid Ontario driver's license and one percent has an out-of-province license (see Table 1).

Eighty-four percent of sampled Ontarians report driving some type of vehicle. This means that one percent of the license-holding population, while legally able to drive, does not actually drive.

Ontario's drivers distribute themselves across the constituent regions of the province in much the same pattern as the population as a whole. Drivers, as a percentage of the regional population, however, are highest in Western Ontario and Central Western Ontario (87% each). The percentage of the entire population who are drivers is slightly lower in the Eastern region (85%) and the Central East region (84%). (A map showing the location of these regions is included in Appendix 1: Methodology).

The percentage of the residents of Metro Toronto who are drivers (80%) is five percentage points below the provincial average. In Northern Ontario, the percentage who are drivers drops to 76 percent — nine points below the provincial average.

3.1.2 Cyclists

Forty-five percent of the sample have ridden a bicycle in the past year along a road or street on which other vehicles can also travel (see Table 2).

Unlike the distribution of drivers, the percentages of residents who are cyclists vary significantly by region across Ontario. Over one-half of Northern Ontarians sampled (53%) have ridden a bicycle in the past year compared to only 37 percent of the residents of Metro Toronto. In between these two extremes, 49 percent of the residents of Central West region have ridden a bicycle, 46 percent of Central East region residents, 45 percent of Eastern Ontarians and 42 percent of Western Ontarians.

Approximately four in ten Ontarians (39%) both drive a motor vehicle and ride a bicycle. In contrast, only six percent of Ontarians rely on a bicycle as their primary means of transportation. This percentage of exclusive cyclists is much higher among the residents of Northern Ontario where it is more than double the provincial average (15%).

TABLE 3
PERCENTAGE OF ONTARIANS WHO ARE EXCLUSIVE PEDESTRIANS
(AGE 15+)

	Exclusive Pedestrians %
Metro Toronto	15
Eastern Ontario	10
Central East	10
Central West	5
Western Ontario	10
Northern Ontario	8
TOTAL ONTARIO	9

3.1.3 Pedestrians

All survey respondents are defined as pedestrians; that is, they are not homebound. Only a very small number of Ontarians (0.1%) are considered to be pedestrians but use a wheelchair as their primary means of getting around.

Nine percent of sampled Ontarians neither drive a vehicle nor ride a bicycle. These individuals either walk (35%), get rides from others (54%), use public transit (49%) or take taxis (10%) in order to get around outside their homes. Given that the emphasis of this particular study is on road use, non-driving/non-cycling individuals are labelled "exclusive pedestrians".

The percentage of exclusive pedestrians is highest in Metro Toronto (15%) and lowest in the Central West region (5%). In other regions examined, the percentage of exclusive pedestrians is approximately 10 percent (see Table 3).

3.2 DEMOGRAPHIC CHARACTERISTICS OF ROAD USERS

3.2.1 Drivers

Drivers generally share a demographic profile similar to the province as a whole. This means that drivers are distributed in various demographic subgroups similar to the distribution of the population as a whole. This is largely due to the high proportion of drivers in the general population of Ontario (see Table 4).

Drivers are similar to the general population of Ontario regarding:

- Age profile, except for an under-representation of drivers in the youngest (15-24) age category (because the minimum age to hold a driver's license is 16);
- Distribution across rural versus urban communities;
- Distribution across education levels;
- Levels of household income;
- The percentage with dependent children in the household; and,
- The percentage speaking English versus other languages in the home.

Nevertheless, there are several important departures between drivers and the general population.

TABLE 4
DEMOGRAPHIC PROFILES: DRIVERS COMPARED TO THE GENERAL POPULATION
(AGE 15+)

	Total Population %	Drivers %
Age		
15 to 24	13	9
25 to 34	30	32
35 to 44	20	22
45 to 54	12	14
55 to 64	11	12
65 plus	14	12
Gender		
Male	53	57
Female	47	43
Community Size		
Less than 5,000	21	21
5,000 to 100,000	26	28
More than 100,000	51	51
Education		
Less than high school	26	23
High school	27	28
Community college	22	23
University	25	26
Work Status		
Full-time work	55	61
Part-time work	10	10
Full-time student	9	6
Homemaker	9	8
Retired	15	13
Occupation		
Professional, managerial	22	26
Sales, service, clerical	24	23
Skilled worker	6	6
Semi, unskilled	10	10
Household Income		
Less than $20,000	18	15
$20,000 to $30,000	17	17
$30,000 to $50,000	28	30
More than $50,000	23	25
Martial Status		
Single	23	20
Married	59	63
Widowed, separated, divorced	18	16
Dependent Children		
Any	46	48
Pre-school	15	15
Public school	24	25
High school	14	14
Post-secondary	8	8
Language at Home		
English	91	92
Other	9	9

- Gender (57% of drivers are male compared to 43% who are female);

- Work status (61% of drivers work full-time compared to 55% of the general population);

- Occupation (26% of drivers work in professional or managerial occupations in contrast to 22% of the general population); and,

- Marital status (63% of drivers are married compared to 59% of the general population).

In summary, drivers, taken as group, have a demographic profile that is similar to the demographic profile of the general public. This is largely because the incidence of drivers among the general population of Ontario is high. Nonetheless, drivers tend to be over-represented among married males who work on a full-time basis.

3.2.2 Cyclists

Just as earlier analyses have shown that the regional distribution of cyclists departs from the distribution of the general population, cyclists differ from the general population of Ontario in a number of demographic areas (see Table 5).

- Cyclists are younger than the general population (55% are less than 35 years of age);

- They are predominantly male (60% are male and 40% are female);

- They tend to be university-educated (31% of cyclists have university educations, compared to 25% of the general population);

- A large number of cyclists work on either a full- (63%) or part-time basis (13%);

- Cyclists tend to work in professional or managerial positions (27% compared to 22% of the general population);

- They have middle-to-high household incomes as compared to the general population (35% earn $30,000 to $50,000 and an additional 30% earn more than $50,000, while in the general population, 28% earn $30,000 to $50,000 and 23% earn more than $50,000);

- Cyclists are over-represented among the single, never-married population (29% versus 23% in the general population); but,

- Among those who have families, cyclists are likely to have a dependent child at home (58%), particularly in the public school age bracket (35%).

TABLE 5
DEMOGRAPHIC PROFILES: CYCLISTS COMPARED TO THE GENERAL POPULATION
(AGE 15+)

	Total Population %	Cyclists %
Age		
15 to 24	13	18
25 to 34	30	37
35 to 44	20	22
45 to 54	12	13
55 to 64	11	7
65 plus	14	3
Gender		
Male	53	60
Female	47	40
Community Size		
Less than 5,000	21	21
5,000 to 100,000	26	27
More than 100,000	51	52
Education		
Less than high school	26	20
High school	27	26
Community college	22	23
University	25	31
Work Status		
Full-time work	55	63
Part-time work	10	13
Full-time student	9	13
Homemaker	9	8
Retired	15	4
Occupation		
Professional, managerial	22	27
Sales, service, clerical	24	27
Skilled worker	6	6
Semi, unskilled	10	11
Household Income		
Less than $20,000	18	9
$20,000 to $30,000	17	14
$30,000 to $50,000	28	35
More than $50,000	23	30
Martial Status		
Single	23	29
Married	59	60
Widowed, separated, divorced	18	11
Dependent Children		
Any	46	58
Pre-school	15	18
Public school	24	35
High school	14	19
Post-secondary	8	9
Language at Home		
English	91	93
Other	9	8

In summary, cyclists tend to be young and affluent, and to function in managerial and professional roles. Cycling is an activity that is particularly popular among parents with young families.

3.2.3 Exclusive Pedestrians

Exclusive pedestrians constitute the smallest segment of the population. They also possess the most distinctive demographic profile in comparison to other road user groups (see Table 6).

- Exclusive pedestrians include twice as many individuals 55 years of age or older as the general population of Ontario (51% versus 25%);
- Over eight in ten are female (85%), while very few are male (15%);
- They tend to live in larger communities (60% live in communities with a population greater than 100,000);
- They tend to be less highly educated (41% have less than high school education);
- Nearly one-half are retired (46%);
- Nearly one-half have household incomes of less than $20,000 (47%);
- Compared to the general population, exclusive pedestrians are over-represented among the widowed, separated and divorced (36% versus 18%);
- Few households in which exclusive pedestrians live include dependent children (18%); and,
- Exclusive pedestrians represent the largest group that speaks a language other than English in their homes (11%).

In summary, exclusive pedestrians tend to be the older, retired and less affluent members of Ontario's population.

3.3 GENERAL CHARACTERISTICS OF DRIVERS

3.3.1 Distribution by License Class

To understand fully the data presented below, it is important to know that license class categories are not mutually exclusive. Residents of Ontario can hold more than one class of licence; therefore, percentages of drivers by license class add up to more than 100 percent. As well, individuals who hold higher classifications of licenses automatically qualify to drive lower classes of vehicles.

TABLE 6
DEMOGRAPHIC PROFILES: EXCLUSIVE PEDESTRIANS COMPARED TO THE GENERAL POPULATION (AGE 15+)

	Total Population %	Pedestrians %
Age		
15 to 24	13	18
25 to 34	30	15
35 to 44	20	9
45 to 54	12	7
55 to 64	11	7
65 plus	14	44
Gender		
Male	53	15
Female	47	85
Community Size		
Less than 5,000	21	24
5,000 to 100,000	26	14
More than 100,000	51	61
Education		
Less than high school	26	41
High school	27	22
Community college	22	19
University	25	16
Work Status		
Full-time work	55	24
Part-time work	10	4
Full-time student	9	7
Homemaker	9	13
Retired	15	46
Occupation		
Professional, managerial	22	7
Sales, service, clerical	24	15
Skilled worker	6	3
Semi, unskilled	10	3
Household Income		
Less than $20,000	18	47
$20,000 to $30,000	17	15
$30,000 to $50,000	28	10
More than $50,000	23	4
Martial Status		
Single	23	25
Married	59	37
Widowed, separated, divorced	18	36
Dependent Children		
Any	46	18
Pre-school	15	7
Public school	24	7
High school	14	6
Post-secondary	8	3
Language at Home		
English	91	87
Other	9	11

(Please see Appendix 2 for definitions of vehicle class and the types of vehicle which can be operated by holders of each).

Nevertheless, more drivers in Ontario hold a G-class or automobile/small truck licence than any type of license available from the Ministry. More than nine in ten drivers in the province (91%) hold a G-class license and no other class of license (see Table 7).

Other types of license classes or combinations of classes tend to be relatively rare in the general population of drivers. In order to make sure that individuals with these license classes were represented in sufficient numbers to undertake subgroup analyses, these license classes were oversampled from the master driver file of the Ministry.

Seven percent of Ontario's drivers have an M-class or motorcycle license; a very high percentage of these M-class license holders also have another type of license. Eighty-three percent have a G-class license and 10 percent have a D-class or large truck license. These overlaps should be taken into account when analyzing data by license class because it generally means that a person has a motorcycle license and an endorsement to drive another type of vehicle.

Four percent of drivers have a D-class license allowing them to drive a truck up to 4,600 kilograms. In addition, two percent have an A-class or tractor trailer license. After oversampling, these two license class, A- or D-class, account for 16 percent of the total sample of drivers.

One percent of Ontario's drivers has a B-class or school bus license. Less than one percent has an E-class or maximum 24-passenger school bus license. The oversampling procedure raises the percentage of B- or E-class license holders to nine percent of the total sample.

Less than one percent of licensed drivers in Ontario hold either a C-class (regular bus) or F-class (24-passenger bus, ambulance) license. After oversampling, the percentage of C- or F-class license holders is raised to nine percent of the total sample.

3.3.2 Driving Experience

For the most part, the driving public appears to have moderate to high levels of experience driving (see Table 8). Three-quarters of sampled drivers (77%) indicate that they have had a license for 11 or more years. In fact, one-third report that they have been driving for more than 25 years.

Drivers with less than 11 years driving experience, in total, account for 22 percent of drivers. Thirteen percent have held a driver's license between six and 10 years, while only nine percent have held a license for five years or less. Holding a license does not mean, however, that a person has had a great deal of driving experience.

TABLE 7
DISTRIBUTION OF LICENSE CLASSES
(Drivers, N=842)

Class	Drivers %
G	91
M	7
D	4
A	2
B	1
C	<.5
E	<.5
F	<.5
L	<.5
A/D	6
B/E	1
C/F	1
DM	1
GM	5
AC/AM/ACM	<.5

Note: License classes not shown were represented in extremely small numbers in the sample.

TABLE 8
DRIVING EXPERIENCE AND LICENSE CLASS
(Drivers, N=842)

Years Licensed	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle* %
Less than 5 years	9	1	2	1	11	4
6 to 10 years	13	10	8	12	13	18
11 to 25 years	44	49	59	63	42	66
More than 25 years	33	40	31	24	34	13

* License holder with a motorcycle endorsement.
References throughout are to drivers with a motorcycle endorsement.

TABLE 9
FREQUENCY OF DRIVING AND LICENSE CLASS
(Drivers, N=842)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Everyday	74	94	91	96	73	93
Several times per week	12	4	6	3	13	5
once/twice per week	7	2	4	1	8	2
Several times per month or less	6	-	-	-	6	-
DK/NA	2	-	-	-	1	-

Young drivers, in particular, may hold a license, but may not have frequent opportunities to drive.

Ten percent of G-class only license holders have five years or less of total driving experience, while 76 percent have had 11 or more years experience. Nevertheless, because G-class licensees account for such a large number of individuals, this means there is a substantial number of drivers with less than five years of driving experience currently using the public road system.

B- or E-class, A- or D-class and C- or F-class license holders have the most experience driving. Approximately 90 percent of each of these license class groups have 11 or more years experience driving.

Licensed drivers with a motorcycle endorsement represent the middle of the driving experience continuum. On one hand, they are not as inexperienced as the G-class license holders; on the other, they are not as experienced as the A- through F-class group of drivers. Seventy-nine percent of license holders with an M-class endorsement have been driving for 11 years or more, 22 percent for 10 years or fewer.

3.3.3 Frequency of Driving

Three-quarters of drivers in this study use the public road system everyday or almost everyday (see Table 9). An additional 12 percent indicate that they drive several times a week but not everyday. Seven percent indicate that they drive once or twice a week and six percent less frequently. (One percent of license holders indicate that they do not drive).

Individuals who hold either of the two bus class licenses (C- or F-class) are the most frequent road users. Ninety-six percent of these license holders indicate that they are driving everyday.

C- or F-class license holders are closely followed by A- or D-class license holders (94% drive everyday), individuals with an M-class license (93%) and B- or E-class license holders (91%).

G-only license holders represent the one group that drives less frequently. Nevertheless, 73 percent of individuals with only a G-class license drive everyday, 13 percent several times a week and eight percent once or twice a week. Only six percent drive less frequently than weekly.

3.3.4 Reasons for Driving

Nearly one-half of the sampled drivers (45%) use the public road system in order to commute between home and place of work. An additional 10 percent of drivers drive as part of their jobs. In total, 55 percent of drivers are using their vehicles for work- or business-related reasons (see Table 10).

TABLE 10
REASONS FOR DRIVING BY LICENSE CLASS
(Drivers, N=842)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Work commuting	45	42	18	41	45	59
Drive as job	10	41	61	43	7	23
School commuting	3	2	2	5	3	3
Social/recreational	15	7	6	5	15	8
Shopping/personal	27	7	11	7	29	7

TABLE 11
PERCENTAGE DRIVING ON FREEWAYS
(Drivers, N=850)

	Often %	Sometimes * %
TOTAL DRIVERS	35	26
Class		
A or D	42	29
B or E	46	24
C or F	39	30
G only	32	27
Motorcycle	55	22
Region		
Metro Toronto	46	28
Eastern Ontario	43	20
Central East	31	26
Central West	39	30
Western Ontario	15	28
Northern Ontario	6	14

* Percentages calculated horizontally

Twenty-seven percent of sampled drivers say that their most frequent reason for driving is to go shopping or to attend to personal business. Fifteen percent report that they are driving in order to reach social or recreational destinations and three percent indicate that they drive between home and school.

Drivers who hold license classes A through F are most likely to say that they are driving in order to earn a living and, secondarily, to travel between work and home. Sixty-one percent of B- or E-class license holders drive as part of their job and 18 percent for commuting. Forty-three percent of C- or F-class license holders drive as part of their work and 41 percent to commute. Forty-one percent of A- or D-class license holders drive to earn a living and an additional 42 percent commute.

While 23 percent of drivers with an M-class license drive as part of their job, 59 percent drive in order to commute between home and work.

G-only license holders give substantially different reasons for driving their vehicles. Although the largest percentage indicate that they are driving between home and work (45%), significant numbers generally are driving to go shopping or to attend to personal business (29%) and to reach social or recreational destinations (15%).

As one might expect, there is a strong relationship between driving frequently and driving for work-related reasons. Alternatively, less frequent drivers tend to drive for non-work (recreational, social or personal business) related reasons.

3.3.5 Driving on Freeways

The percentages of drivers who say that they drive frequently on freeways differ considerably by license class and by the region in which they live. The point of comparison for these analyses is the provincial average of 35 percent of Ontario's licensed drivers who indicate that they drive frequently on the freeway system. (Freeways are defined as controlled access highways that are four or more lanes wide. Typically, freeways are identified as "400 series" highways.)

M-class (55% often drive on freeways), B- or E-class (46%) and A-or D-class endorsement holders (42%) drive more frequently on the freeway system than C- or F-class license holders (39%) or those who hold only a G-class license (32%) (see Table 11).

Drivers who live in Metro Toronto are the most frequent users of freeways. Forty-six percent say they often drive on freeways, while an additional 28 percent indicate occasionally driving on freeways.

In rank order, Metro Toronto drivers are followed by drivers in Eastern Ontario (43% often, 20% sometimes), Central West region (39% often, 30% sometimes), Central East region (31% often, 26% sometimes),

TABLE 12
FREQUENCY OF CYCLING BY AGE
(Cyclists, N=452)

	Total Cyclist %	15-24 Years %	25-34 Years %	35-44 Years %	45-64 Years %	65+ Years %
Everyday	16	30	19	6	11	-
Several times per week	19	24	11	24	19	35
Once/twice per week	25	29	29	21	20	12
Several times per month or less	40	17	41	48	48	54

TABLE 13
REASONS FOR CYCLING BY AGE
(Cyclists, N=449)

	Total Cyclist %	15-24 Years %	25-34 Years %	35-44 Years %	45-64 Years %	65+ Years %
Recreation, exercise	88	74	86	95	95	100
Work commuting	7	13	9	2	2	-
Shopping/personal	3	3	4	1	2	-
School commuting	1	6	-	-	-	-
Training, racing, touring	1	4	<.5	-	-	-

Western Ontario (15% often, 28% sometimes) and, finally, Northern Ontario (6% often, 14% sometimes).

3.4 GENERAL CHARACTERISTICS OF CYCLISTS

3.4.1 Frequency of Cycling

Forty percent of respondents who cycle use their bicycles a few times per month or even less frequently and 25 percent cycle once or twice a week (see Table 12). In contrast, only 16 percent of cyclists ride their bicycles everyday or almost everyday. These findings suggest that cycling is a recreational activity rather than a primary means of transportation for most Ontarians.

There is a relatively strong relationship between age and frequency of cycling. Younger Ontarians cycle more frequently (30% of cyclists between 15 and 24 years of age cycle everyday) than any other age group in the population. In fact, the percentage of frequent cyclists decreases in each successive age group, while the percentage of occasional and infrequent cyclists increases.

3.4.2 Reasons for Cycling

The findings presented in Table 13 confirm that cycling is largely a leisure activity undertaken for physical recreation. Nine out of ten cyclists (88%) indicate that they ride a bicycle either for recreational purposes or for exercise.

Relatively small percentages of cyclists indicate that they use their bicycles to commute between work and home (7%), to go shopping or to attend to personal business (3%), to cycle between home and school (1%) or to train, race or tour (1%).

Only among the youngest cyclists (15 to 24 years of age) are there significant percentages who ride their bicycles for non-recreational purposes. Although three-quarters indicate that they cycle for recreation or exercise, 13 percent use their bicycles to commute to work, six percent to go to and from school, four percent to train, race or tour, and three percent to go shopping.

Frequent cyclists -- those who ride their bicycles everyday or almost everyday -- tend to be riding for reasons other than recreation. Alternatively, occasional and infrequent cyclists are riding their bicycles for recreational purposes.

TABLE 14
KNOWLEDGE OF LICENSE CLASS AND VEHICLE TYPE *
(Drivers, N=842)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Car	100	100	100	100	100	100
Pick-up truck	85	100	97	96	82	100
Van, camper	77	97	97	99	75	96
Snowmobile	56	63	60	62	54	72
Motorcycle	15	24	10	19	8	100
Large truck	12	91	71	57	6	25
School bus	4	12	93	23	2	5
Regular bus	4	18	69	54	2	5
Tractor trailer	3	35	10	33	1	8

* Each cell in this table should be read individually. The base for the percentage appears at the top of each column. Reading across the second row, 85% of all drivers, 100% of A or D class, 97% of B or E class, 96% of C of F class, 82% of G only and 100% with a motorcycle endorsement believe they can drive a pick-up truck.

The analysis contained in section 4.1.3 compares the percentage who believe they can operate a particular type of vehicle against the percentage actually authorized to do so.

4.0 DRIVERS' KNOWLEDGE OF THE RULES OF THE ROAD AND DRIVING TECHNIQUES

4.1 LICENSE CLASS AND VEHICLE TYPE

4.1.1 Introduction

This is the first of a series of analyses designed to gauge road users' knowledge of the rules of the road and safe road use practices. In this report section, we are examining the knowledge of drivers as to the kind of vehicles they are permitted to drive, given their license class.

In Ontario, drivers can qualify for various classes of license that permit them to drive vehicles ranging from tractor trailers and school buses to cars and motorcycles. The analysis of the relationship between license class and vehicle type, however, should take into account the following three points.

First, a driver can hold more than one class of license. For example, a driver can hold a GM-class license that permits him/her to drive both a car and a motorcycle.

Second, there is a hierarchy of license classes in which "higher" license classes can automatically drive "lower" classes of vehicles. For example, a person with a B-class or school bus license is allowed to drive C-class (regular buses), D-class (large trucks), E-class (24-passenger school buses) and G-class vehicles (cars and light trucks).

Third, obtaining an M-class or motorcycle license is independent of any other vehicle class except in combination. That is, regardless of what type of driver's license a person holds (A- through G-class), he or she must also qualify for an M-class license in order to drive a motorcycle.

4.1.2 Classification of Inaccuracies about Licenses

There are several areas in which drivers have an inaccurate impression of what types of vehicles they are allowed to drive, given their license class. These are:

1 - Drivers believe they can drive a particular type of vehicle, even though they do not possess the required license endorsement. These might be termed negative inaccuracies, because drivers think they can drive a vehicle that they are technically not qualified to operate.

2 - Drivers are unaware that they can actually drive another vehicle type if they wish. These might be termed neutral inaccuracies because drivers are qualified to operate these vehicles.

4.1.3 Negative Inaccuracies

The main finding regarding negative inaccuracies is the fact that although seven percent of Ontario's drivers hold an M-class (motorcycle) license, 15 percent of licensed drivers believe that they are permitted to drive a motorcycle. Nevertheless, it remains a question whether or not the individuals who do not have an M-class would actually attempt to drive a motorcycle (see Table 14).

Twelve percent of Ontario's drivers think that they are permitted to drive a large truck (such as a dump truck). Between eight and nine percent of drivers, in reality, hold an A-, B-, C- or D-class license.

Four percent of Ontario's drivers believe that they are licensed to drive a school bus or a regular (public transit) bus. In fact, one percent of drivers is licensed to drive a school bus and less than 0.5 percent is qualified to drive a regular bus.

Although the difference in percentages is small, three percent of drivers believe they are able to operate a tractor trailer, when, in actuality, only two percent are licensed to do so.

G-Class

Drivers holding only a G-class license are permitted to drive cars, vans and pick-up trucks and are not allowed to drive A- through F-class vehicles or motorcycles. Because of the large number of G-class drivers in Ontario, the overall percentage of negative inaccuracies appears relatively minor. It is important, however, to remember that this is the largest single group of drivers. Therefore, even a small percentage of this group represents a larger number of drivers than a similar percentage of other classes.

Eight percent of drivers who only hold a G-class license believe that they are permitted to drive a motorcycle. Six percent believe they are permitted to operate a large truck, two percent a school bus, two percent a regular bus and one percent a tractor trailer.

Other License Classes

Other classes of drivers are much less likely to contribute to negative inaccuracies. Drivers with more specialized licenses tend to have a better idea of the types of vehicles they are allowed and not allowed to drive.

A small number of A-, C-, D- and F-class license holders believe they can drive motorcycles when, in fact, they cannot. Some A-and D-class license holders think they can drive school buses or regular buses. As well, a small percentage of C- or F-class believe they can drive a school bus (see Table 14).

TABLE 15
WHAT TO DO WHEN A TRAFFIC SIGNAL TURNS FROM GREEN TO AMBER
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Stop	55	43	58	52	56	53
Stop, if possible, or else proceed with caution	29	40	40	33	28	32
Slow down, use caution	12	11	2	12	12	14
Continue, speed up	2	2	-	3	2	<.5
DK/NA	<.5	-	-	-	<.5	-

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Stop	55	34	68	58	45	48
Stop, if possible, or else proceed with caution	29	37	24	30	40	34
Slow down, use caution	12	24	4	10	11	12
Continue, speed up	2	4	4	1	2	5
DK/NA	<.5	-	-	-	-	-

4.2 INTERSECTION BEHAVIOUR

4.2.1 Introduction

The following four report sections deal with relatively common situations that drivers face. After each situation is verbally described, respondents are questioned regarding proper intersection behaviour (see questionnaire in Appendix 3). Answers are based on knowledge of the rules of the road or of current driving techniques. In each situation, there is a correct or recommended course of action outlined in **The Driver's Handbook** or in **Road Worthy**. (**The Driver's Handbook** is the Ministry booklet outlining the laws and rules governing motor vehicles. Successful completion of a written examination based upon the contents of the **Handbook** allows a person to qualify for a Learner's Permit. **Road Worthy** is a textbook produced by the Ministry for use in high school driver education courses.)

The situations described in the interview include:

1 - Intersection behaviour;

2 - Freeway driving;

3 - Driving on two-lane highways and roads; and,

4 - Emergency situations.

Three sets of data are presented in each analysis. First, there is an analysis based on the responses of all licensed drivers in Ontario. Second, there is an analysis by license class. Finally, there is an examination of the responses of particular groups of individuals who, based on the findings of this study, may display lower levels of knowledge.

4.2.2 Traffic Signal Changing from Green to Amber

Overall Responses

Respondents are presented with the situation of approaching an intersection with traffic signals. As they approach, the traffic signal changes from green to amber. Respondents are asked what they should do in this particular situation.

The Driver's Handbook states that a solid amber traffic signal indicates that a driver must stop, if he or she can do so safely. If a driver judges that a stop can not be made safely, he or she may proceed through the intersection cautiously.

TABLE 16
PROCEDURE FOR MAKING A LEFT TURN AT A BUSY INTERSECTION
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Wait for traffic to stop	82	92	86	94	81	88
Oncoming traffic required to stop	14	7	12	5	14	8
Depends	4	1	2	1	4	4
DK/NA	1	-	-	-	1	-

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Wait for traffic to stop	82	71	70	72	86	82
Oncoming traffic required to stop	14	29	20	19	11	14
Depends	4	-	8	8	2	4
DK/NA	1	-	2	1	1	-

In total, 29 percent of Ontario's drivers provide the right answer as it is stated in **The Driver's Handbook.**

Fifty-five percent of drivers believe that they should stop, without giving the qualification that they must be able to do so safely. Although this is technically incorrect, it should not be regarded as a totally incorrect answer as it does present the principal idea: an amber signal means "stop" (see Table 15).

Twelve percent of Ontario's drivers say that they should slow down and use caution going through the intersection. Again, this is a technically incorrect response because it does not state that the first priority is to come to a stop. This is actually the correct response to a flashing yellow signal.

A totally incorrect response is given by two percent of drivers. These respondents indicate that they should accelerate through the intersection rather than stopping or even slowing down.

By License Class

Four in ten drivers with an A-, D-, B- or E-class license give the correct response of stopping if safe,or proceeding with caution. This is 11 percentage points above the provincial average.

Fifty-eight percent of B- or E-class license holders and 56 percent of G-only drivers indicate that they should stop without giving any other qualifications.

Two percent of A- or D-class drivers, three percent of C- or F-class drivers and two percent of G-only drivers believe that they should accelerate when they see an amber signal when approaching an intersection.

Specific Subgroups of the Population

Drivers who are most likely to give the unacceptable response of accelerating through an intersection on an amber signal have the following characteristics. They are over-represented among respondents who do not speak English at home (5%) and by those in the youngest age group of 16 to 24 years of age (4%).

As well, 24 percent of drivers in the 16 to 24 age group indicate that motorists are required to slow down while proceeding cautiously, as opposed to coming to a full stop.

4.2.3 Left Turns at Busy Intersections

Overall Responses

Survey respondents are presented with the situation of having to make a left turn at a busy intersection. While in the intersection, the

TABLE 17
RIGHT-OF-WAY: PEDESTRIANS CROSSING VERSUS VEHICLES TURNING
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Pedestrians have right-of-way	96	97	97	98	96	98
Motorists have right-of way	4	2	3	1	4	2
Depends	<.5	1	-	1	<.5	-
DK/NA	<.5	-	-	-	<.5	-

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Pedestrians have right-of-way	96	94	94	93	93	90
Motorists have right-of-way	4	6	4	5	7	9
Depends	<.5	-	2	1	-	<.5
DK/NA	<.5	-	-	1	-	-

traffic light turns from green to amber. (This is not an uncommon situation for drivers in urban areas who have to deal with heavy traffic flow.)

Respondents are then asked whether they should 1) wait for the oncoming traffic to stop before completing their turn or 2) simply proceed through the intersection because the oncoming traffic is required to stop.

Over eight in ten drivers (82%) give the response that they should wait for the oncoming traffic to stop rather than assuming that it is required to stop. Fourteen percent of drivers believe that the oncoming traffic is required to stop, allowing them to complete their left turn (see Table 16).

Four percent of drivers report that it depends on the situation. One percent is unable to provide a response.

By License Class

Knowledge that drivers making a left turn on an amber should wait for oncoming traffic to stop is high among C- or F-class drivers (94%), among A- or D-class drivers (92%) and among M-class license holders (88%).

Drivers who hold only a G-class license are the most likely individuals to believe that oncoming traffic is required to stop for them (14%). G-class license holders are followed by B- and E-class license holders (12%).

Specific Subgroups of the Population

Twenty-nine percent of drivers in the youngest age category (16 to 24 years of age) believe that oncoming traffic is required to stop. As well, 20 percent of drivers age 65 or older and 19 percent of less frequent drivers feel that they have the right-of-way.

Although this type of situation is common in Metro Toronto, 86 percent of sampled Metro drivers would wait for oncoming traffic to stop, while only 11 percent believe that oncoming traffic is required to stop.

4.2.4 Pedestrians Crossing Versus Motorists Turning

Overall Responses

Drivers are asked whether motorists making a right turn with a green light or pedestrians crossing with the light have the right-of-way. (At intersections, pedestrians do, in fact, have the right-of-way.) (See Table 17).

TABLE 18
COINCIDENT ARRIVAL AT FOUR-WAY STOP SIGNS
(Driver, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Car on right	87	90	86	92	86	89
Driver	7	4	4	2	7	10
Depends	4	3	6	5	5	-
DK/NA	2	3	5	1	2	1

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Car on right	87	80	93	86	81	72
Driver	7	13	1	8	10	13
Depends	4	7	6	4	8	11
DK/NA	2	-	-	1	2	3

Almost all drivers indicate that pedestrians have the right-of-way (96%). The remaining four percent believe that motorists take precedence over pedestrians.

By License Class

Regardless of license class, there is a near unanimous understanding that pedestrians have the right-of-way. Four percent of G-only license holders, however, believe that vehicles have the right-of-way.

Specific Subgroups of the Population

There is only one population segment in which a significant percentage believe that motorists have the right-of-way over pedestrians. Nine percent of drivers who do not speak English in their homes are under the impression that vehicles take precedence over pedestrians when both are proceeding with the lights. Seven percent of drivers in Metro Toronto believe that drivers have the right-of-way over pedestrians.

4.2.5 Coincident Arrival at Four-Way Stop Signs

Overall Responses

Drivers are asked to comment on who has the right-of-way in the situation where two cars meet at an intersection with four-way stop signs. Close to nine of ten of sampled drivers (87%) correctly state that the car approaching from the right can proceed through the intersection first (see Table 18).

Seven percent of drivers, however, give the wrong response. An additional four percent indicate that it depends on the situation, but this should be considered an incorrect response. In total, 11 percent give an incorrect answer, while two percent are unable to provide any answer.

By License Class

The highest percentage of correct responses is found among C- or F-class license holders (92%) and among A- or D-class drivers (90%).

The highest percentage of incorrect responses, including the "depends" response, is found among drivers with a G-only license (12%), an M-class license (10%) and B- or E-class licenses (10%).

Specific Subgroups of the Population

There are three demographic groups that have significantly higher percentages of wrong answers (including the "depends" response) in contrast to the average for all of Ontario's drivers. Twenty-four percent of drivers who do not speak English at home give either the wrong answer or the "depends" response, as do 20 percent of those in the 16 to 24 age group and 18 percent of Metro Toronto drivers.

TABLE 19
MERGING ONTO FREEWAYS
(Freeway Drivers, N=737)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Adjust speed in acceleration lane	83	89	88	97	82	96
Merge as quickly as possible	11	8	10	3	12	2
Depends	5	3	2	-	5	1
DK/NA	1	-	-	-	1	-

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Adjust speed in acceleration lane	83	89	65	79	88	75
Merge as quickly as possible	11	6	16	12	8	20
Depends	5	2	17	9	3	3
DK/NA	1	2	2	-	1	3

4.3 FREEWAY DRIVING

4.3.1 Introduction

Sampled drivers who use freeways even infrequently are asked a specific set of questions regarding high-speed driving techniques. (As previously stated, freeways are controlled access highways with four or more lanes of traffic.) Respondents who indicated that they never drive on freeways were not required to answer this set of questions.

4.3.2 Merging Onto Freeways

Overall Responses

Respondents who drive on freeways are asked to choose between two methods of entering a freeway from an access road: 1) reaching highway driving speeds in the acceleration lane, then merging into the flow of traffic; or 2) getting into the flow of traffic as quickly as possible, regardless of the speed of travel. The former is considered the correct answer (see Table 19).

Eighty-three percent of Ontario's freeway users report that the acceleration lane is the correct place to adjust to highway driving speeds. Eleven percent say that it is best to merge onto the freeway as soon as possible, regardless of speed.

Five percent say that it depends on the situation. One percent cannot respond to the question.

By License Class

Very high percentages of C- or F-class drivers (97%) and M-class operators (96%) give the correct answer. G-only drivers (12%) and B- or E-class license holders (10%) are the most likely to give the wrong answer to the question.

Specific Subgroups of the Population

In contrast to other analyses presented thus far, we find that members of the youngest age group of drivers (89%) and drivers from Metro Toronto (88%) exceed the provincial norm regarding knowledge of the correct technique for merging onto a freeway.

The findings indicate that drivers who do not speak English in their homes are the most likely to get this question wrong (20%) or to be unable to respond to the question (3%). Drivers who are 65 years of age or older tend to be unsure of how to respond to the question (17% say depends).

TABLE 20
FREEWAY LANE NORMALLY DRIVE IN
(Freeway Drivers, N=737)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Right	71	71	77	70	69	79
Centre	16	14	14	17	17	12
Left	3	1	-	3	4	2
Depends	10	13	9	10	10	6
DK/NA	1	1	-	-	<.5	1

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Right	71	69	64	68	59	52
Centre	16	20	17	14	26	28
Left	3	6	-	4	3	3
Depends	10	5	17	14	11	18
DK/NA	1	-	1	-	-	-

4.3.3 Lane In Which Normally To Travel

Overall Responses

Under normal driving conditions and speeds, motorists should travel in the right lane of multi-lane highways, using either the centre or left lane to pass slower moving vehicles.

When asked the correct lane in which to travel, slightly more than seven in ten freeway drivers (71%) indicate the right lane. Sixteen percent report that they should be travelling in the centre lane and three percent indicate driving in the left lane (see Table 20).

Ten percent of freeway drivers say that it depends on the situation and one percent cannot answer the question.

By License Class

Drivers with either an M-class (79%) or a B- or E-class license (77%) are the most likely to indicate that they should be driving in the right lane. Drivers with only a G-class license are the largest group reporting that they should be driving in the centre (17%) or the left (4%) lane. C- or F-class drivers (17% centre lane, 3% left lane) display levels of knowledge similar to that of G-class drivers.

Specific Subgroups of the Population

The two largest groups indicating that they should normally travel in the centre lane of a multi-lane highway are Metro Toronto residents (26%) and respondents who do not speak English in their homes (28%). Furthermore, non-English speakers (18%) and individuals 65 years of age or older (17%) are the most likely to indicate that lane choice depends on the situation or that it is does not matter.

4.3.4 Safe Following Distance

Overall Responses

The recommended method for calculating a safe following distance is the "two-second" rule - that is, a driver should create a gap of at least two seconds travelling time to reach the vehicle directly ahead. Not only is this the recommended method for following on controlled access highways, but also on other types of roads as well. The "two-second" rule is mentioned in both The Driver's Handbook and Road Worthy.

The "two-second" rule for calculating a safe following distance is not well-recognized by sampled drivers. In fact, only eight percent of drivers mention this method when questioned regarding safe following distance.

TABLE 21
SAFE FOLLOWING DISTANCE ON FREEWAYS
(Freeway Drivers, N=737)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Two-second gap	8	7	15	12	8	14
1-car length for each 15 km/hr	26	26	16	30	25	40
Other distance/time	56	58	57	47	57	43
DK/NA	7	5	8	5	8	1

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Two-second gap	8	35	2	7	6	13
1-car length for each 15 km/hr	26	7	22	20	24	12
Other distance/time	56	49	70	67	59	69
DK/NA	7	3	4	5	9	5

A much larger percentage of drivers (26%) indicate that the way to ensure a safe following distance is to create a gap that corresponds to one car length for each 15 kilometers per hour travelling speed (see Table 21).

Over one-half of drivers mention other methods of arriving at a safe following distance. Respondents give a variety of combinations of distance, speed and time other than the "two-second" rule or the one car length for each 15 kilometers per hour calculation.

By License Class

Drivers with a B- or E-class (15%) or M-class (14%) license are the most likely individuals to mention the "two-second" rule. Only eight percent of G-only drivers and seven percent of A- or D-class drivers mention this method of arriving at a safe following distance.

M-class license holders are much more likely than other drivers to use the one car length for every 15 kilometers per hour method of calculation. Forty percent of M-class license holders report that this is the correct way to determine a safe following distance. This is 14 percentage points above the provincial average.

Specific Subgroups of the Population

While Ontario's youngest drivers have demonstrated less knowledge in other areas of driving, they are the most likely group to use the "two-second" rule to calculate a safe following distance. Thirty-five percent of drivers who are between 16 and 24 years of age mention this rule.

Two subgroups of the population are more likely than other drivers to recommend methods other than the "two-second" rule or the car length\speed calculation. Seventy percent of drivers who are 65 years of age or older, 69 percent of those who do not speak English in their home, and 69 percent of less frequent drivers use other methods by which to determine a safe following distance.

4.4 TRAVELLING ON TWO-LANE ROADS

4.4.1 Painted Lane Markings and Passing Other Vehicles

Overall Responses

All drivers are asked questions about specific situations while driving on two-lane roadways. These include passing a slower moving vehicle and emergency situations.

When drivers are asked what painted lane markings in the centre of the road indicate that it is permissible to pass, 88 percent correctly identify that it is a broken centre line. An additional 19 percent

TABLE 22
BROKEN CENTRE LINE INDICATING IT IS PERMISSIBLE TO PASS
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Broken centre line	88	88	98	98	87	96
Broken on driver's side, solid on other	19	22	11	22	18	21
Solid single line	2	1	-	1	3	1
Other lane marking	2	1	2	5	3	-
DK/NA	2	1	-	-	2	<.5

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Broken centre line	88	81	70	82	87	80
Broken on driver's side, solid on other	19	31	16	19	23	6
Solid single line	2	-	14	4	2	4
Other lane marking	2	2	8	6	2	9
DK/NA	2	2	3	3	3	9

qualify that it can be a broken centre line on the driver's side and a solid line on the other side (see Table 22).

Two percent of drivers give the incorrect response of a solid single centre line. Another two percent indicate other incorrect lane markings (for example, a solid double centre line). Two percent of drivers are unable to respond to the question.

By License Class

High percentages of B- or E-class (98%), C- or F-class (98%) and M-class license holders (96%) recognize that a broken centre line indicates that it is permissible to pass a vehicle. In addition, 22 percent of C- or F-class and 21 percent of M-class drivers further identify a broken/solid centre line combination.

G-only license holders have the lowest percentage of correct answers (87%) coupled with the highest percentage of incorrect responses (6%).

Specific Subgroups of the Population

Two groups demonstrate significantly lower levels of knowledge regarding painted lane markings that permit passing. Seventy percent of drivers 65 years of age or older and 80 percent of drivers who do not speak English in their homes indicate a broken centre line. An additional 16 percent of those 65 or older and six percent of the non-English group report a broken/solid combination. Members of these two groups of drivers are also the most likely individuals to give incorrect responses (22% for the 65 or older group and 13% for the non-English group).

4.4.2 Return to Lane after Passing

Overall Responses

Drivers are asked how they recognize that it is safe to return to their lane after passing another vehicle on a two-lane road. Twenty-seven percent indicate that they should see the passed car in their rear-view mirror and should check over their shoulder.

Forty-two percent indicate they would only look in their rear-view mirror, while 21 percent indicate only a shoulder check (see Table 23).

Nine percent of drivers give other responses such as approximating a safe distance in front of the passed car.

By License Class

C- or F-class license holders are much more likely (47%) and M-class license holders are somewhat more likely (39%) than the average driver

TABLE 23
CHECKING WHEN IT IS SAFE RETURN TO LANE AFTER PASSING
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Car in rear mirror and shoulder check	27	24	32	47	25	39
Look in rear mirror only	42	50	51	34	42	33
Shoulder check only	21	16	10	16	22	21
Other	9	9	2	3	9	8
DK/NA	1	1	4	-	2	-

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Car in rear mirror and shoulder check	27	30	22	26	26	32
Look in rear mirror only	42	29	52	36	34	23
Shoulder check only	21	29	17	24	26	27
Other	9	11	8	10	12	13
DK/NA	1	2	1	3	2	5

in Ontario to say that they should see the car in their rear-view mirror and check over their shoulder.

One-half of A- or D- and B- or E-class license holders indicate that they should just look in their rear-view mirror to see the front of the passed car before returning to their lane.

Specific Subgroups of the Population

Of the selected subgroups of the population that have been examined more closely, drivers who do not speak English in their homes are the most likely to say that they would look in their rear-view mirror and check over their shoulder (32%). Older drivers are likely to look in their rear-view mirrors, but somewhat less likely to include a shoulder check.

4.4.3 Passing Other Vehicles at Night

Overall Responses

Survey respondents are asked whether or not they would do anything different while passing another vehicle at night. **The Driver's Handbook** indicates that the correct procedure is to switch to low beams when approaching from behind, to warn the driver ahead by switching from high beams to low beams quickly and then to switch to high beams when alongside the car that is being passed.

In fact, less than one-half percent of drivers mentions all three elements of passing at night. Eleven percent of drivers would not do anything differently than would be warranted when passing in the daytime (see Table 24).

Considering each element separately, 25 percent of drivers indicate that they should switch to their low beams and 24 percent indicate flashing their high beams to warn the driver ahead. Only seven percent would switch to their high beams when alongside the vehicle they were passing.

By License Class

A- and D-class drivers are more likely than individuals with other classes of licenses to know the additional requirements for passing another vehicle at night. Thirty-four percent of this group of drivers indicate switching to low beams when approaching, 32 percent flashing high beams when ready to pass, and 12 percent switching to high beams when alongside the vehicle that they are passing.

Twenty-five percent of drivers with only a G-class license either would do nothing differently when passing at night or cannot provide a response.

TABLE 24
PASSING AT NIGHT
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Switch to low beams	25	34	25	21	24	26
Flash high beams	24	32	28	30	24	26
High beams alongside	7	12	1	10	7	13
Other responses	11	11	9	8	10	9
DK/NA	15	9	12	7	15	17

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Switch to low beams	25	19	36	24	10	21
Flash high beams	24	15	22	20	29	17
High beams alongside	7	6	4	3	6	10
Other responses	11	18	9	11	18	11
DK/NA	15	13	13	19	18	11

Specific Subgroups of the Population

Young drivers -- those in the 16 to 24 age group -- are the least knowledgeable about what to do when passing another vehicle at night. Nineteen percent of this group of drivers indicate that they should switch to low beams when approaching, 15 percent indicate flashing high beams when ready to pass and six percent indicate switching to high beams when alongside the vehicle that they are passing.

Metro Toronto drivers are the most likely to say they would do nothing extra when passing at night or are unable to respond to the question (36%).

4.4.4 Emergency Situation: Front Wheels off the Pavement

Overall Responses

Drivers are presented with the situation of driving at high speed along a highway and having their right wheels leave the pavement onto the unpaved shoulder. The recommended technique for dealing with this emergency situation is described in **Road Worthy**:

1 - Take foot off the accelerator pedal.

2 - Brake gently and concentrate on steering the car.

3 - When the car is under control at low speed, steer back onto the roadway.

Sampled drivers generally understand that they should take their foot off the accelerator pedal (46%) and steer back onto the roadway when their vehicle has slowed down (47%). A smaller percentage of drivers (26%) know that they should apply their brakes gently in order to decelerate (see Table 25).

By License Class

All driver classifications except G-only license holders recognize the need to take their foot off the accelerator and to steer back onto the roadway after their vehicle has slowed down. The percentages range from 75 percent of C- or F-class to 53 percent of A- or D-class license holders. Slightly more than 60 percent of A- through F-class drivers know that they should steer back onto the pavement only after their vehicle has slowed down.

Eight percent of G-only drivers are unable to provide a answer about proper procedures in such an event.

TABLE 25
AN EMERGENCY SITUATION: FRONT WHEELS LEAVING THE PAVEMENT
(Driver, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Foot off accelerator; when slowed, steer back	25	36	38	49	23	37
Foot off accelerator; apply brakes gently	7	5	9	10	7	7
Apply brakes gently; when slowed, steer back	6	4	6	4	6	5
Foot off accelerator	46	53	63	75	44	67
Apply brakes gently	26	17	21	16	27	17
When slowed, steer back	47	63	62	64	44	55
Other	11	10	8	5	10	8
DK/NA	7	2	-	-	8	-

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Foot off accelerator; when slowed, steer back	25	23	24	21	25	20
Foot off accelerator; apply brakes gently	7	4	7	10	9	9
Apply brakes gently; when slowed, steer back	6	7	6	5	6	4
Foot off accelerator	46	41	41	45	44	41
Apply brakes gently	26	31	20	27	38	33
When slowed, steer back	47	47	45	39	38	31
Other	11	12	16	14	8	13
DK/NA	7	4	11	9	10	13

Specific Subgroups of the Population

No one particular subgroup of the population is significantly less knowledgeable than the average Ontario driver. There is, however, a lower percentage of drivers who do not speak English at home that say they should steer back only after their vehicle has slowed (31%) and a slightly higher percentage of this group unable to respond to the question (13%).

4.5 KNOWLEDGE OF GENERAL DRIVING PRACTICES

4.5.1 Introduction

This section of the analysis deals with a number of general knowledge questions regarding a variety of driving practices and situations. Topics range from headlight use to insurance coverage when driving while suspended.

Most of the analyses contained in this section will be based on the knowledge levels of all licensed drivers and on specific license classes. When relevant, the responses of appropriate demographic groups will also be examined.

4.5.2 Headlight Use

The Highway Traffic Act states that front and rear lights must be on from one-half hour before sunset to one-half hour after sunrise and when factors such as fog, snow or rain prevent clear vision at a distance of 150 metres or less.

Fifty-four percent of drivers state that they should turn on their lights before sunset to after sunrise. Twenty-three percent give the less specific response of dawn to dusk. Eight percent simply say "at night," and 11 percent indicate that lights should be turned on at sunset (see Table 26).

Twenty-two percent of drivers indicate that they should also turn on their lights in conditions of poor visibility. Six percent believe that their lights should be on at all times, particularly when they are driving on the highway.

Knowledge about the precise times to turn on lights is better among M-class (80%), A- or D-class (78%), B- or E-class and C- or F-class license holders than among G-only drivers. Nevertheless, drivers with only a G-class license are more likely to recognize that a vehicle's lights should be turned on when there are adverse lighting conditions.

Older drivers (65 years of age or older), women, Metro Toronto residents and drivers from Northern Ontario are less likely than

TABLE 26
HEADLIGHT USE
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Before sunset/after sunrise	54	78	76	73	50	80
Dawn to dusk	23	9	10	13	25	12
Poor light conditions	22	13	7	5	23	13
All times	6	5	6	3	6	4
Night	8	3	5	6	9	1
Sunset	11	7	4	10	12	3
DK/NA	<.5	-	<.5	-	1	-

TABLE 27
PASSING A MOTORCYCLIST
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Change lanes	92	97	97	99	92	97
Share lane	5	1	1	1	5	2
Depends	2	2	-	-	2	2
DK/NA	1	<.5	2	-	1	-

TABLE 28
MAXIMUM SPEED IN AN URBAN AREA
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Less than 40 km/hr	4	3	-	3	4	1
40 to 49 km/hr	26	27	20	14	27	16
50 km/hr	55	66	75	75	53	72
51 to 60 km/hr	12	4	5	5	13	8
More than 60 km/hr	2	1	-	1	2	3
DK/NA	1	<.5	<.5	2	1	-

others to know the exact times when vehicle lights are required to be on.

4.5.3 Passing a Motorcyclist

Motorcyclists are entitled to a full lane width. Therefore, drivers should change lanes when passing a motorcyclist rather than sharing the lane with the motorcyclist.

Most drivers across Ontario (92%) know that they should change lanes when passing a motorcyclist. Five percent of drivers give the incorrect response of sharing a lane. Two percent say that it depends on the situation and one percent is unable to respond (see Table 27).

Over 90 percent of G-only drivers give the correct response. Five percent, however, respond incorrectly, and three percent say that it depends on the situation or are unable to give a response.

Less frequent drivers, less educated drivers and drivers who do not speak English at home are the most likely individuals to respond incorrectly to this question.

4.5.4 Maximum Speed of Travel in Urban Areas

The maximum speed in cities, towns, villages and built-up areas, unless otherwise posted, is 50 kilometers per hour. Over one-half of all drivers sampled (55%) and two-thirds to three-quarters of drivers with A- through F- class licenses know the correct speed limit. Thirty-one percent of G-only drivers, however, err on the side of a lower maximum speed (see Table 28).

Fourteen percent of sampled drivers believe that the maximum speed in urban areas is more than 50 kilometers per hour. G-only drivers represent the largest individual group percentage with incorrect knowledge of the speed limit (15%).

Sixteen percent of drivers who live in communities with populations of greater than 100,000 believe that the speed limit is higher than 50 kilometers per hour. Twenty-two percent of Metro Toronto residents think the speed limit is higher than it actually is.

4.5.5 Seatbelt Use

The survey contains two questions related to seatbelt use. The first question involves who is required to wear a seatbelt and the second involves the use of child safety seats. The Highway Traffic Act states that the driver and all passengers must wear a seatbelt at all times. Drivers are responsible for the proper securing of all passengers under 16 years of age. From birth to 23 kg in weight, this involves the use of an approved child seat secured by the car seatbelt in the proper manner. Above 23 kg, children must be secured using the full seatbelt assembly.

TABLE 29
SEATBELT USE
(Drivers, N=850)

Who/when must use	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
All passengers at all times	93	96	98	91	93	98
Medical certificate	2	1	-	3	2	-
No	2	1	<.5	1	2	-
DK/NA	1	-	-	-	1	1
Children in car						
Child safety seat	93	95	89	97	92	96
Regular seatbelt	4	3	4	3	4	<.5
Sit with adult	<.5	1	-	-	<.5	-
Depends	3	2	6	-	3	4
DK/NA	<.5	-	-	-	<.5	-

Ninety-three percent of drivers report that all passengers must wear seatbelts at all times. Two percent of drivers know that individuals are exempt from wearing a seatbelt if they have a medical certificate. Two percent believe that passengers are not required to wear seatbelts at all times, while one percent cannot respond to the question (see Table 29).

G-class license holders represent the largest single group that believes that passengers do not have to wear seatbelts. Although the largest group, only two percent of G-class do not think that seatbelts must be worn all the time.

It is somewhat surprising to find that single (6%) university-educated (6%) Ontarians are the least likely to know that seatbelts must be worn at all times by passengers.

A very high percentage of Ontario's drivers recognize that a child safety seat is required for a small child (93%), as opposed to using a regular seatbelt (4%) or sitting in an adult's lap (<.5%).

Drivers who do not speak English at home are the least likely individuals to give the correct response regarding the use of a child safety seat (83%).

4.5.6 School Buses

The survey of drivers contains two questions about approaching and passing school buses that are picking up or discharging passengers. The first question asks whether or not a driver who is approaching from behind is allowed to pass a stopped school bus that has its red warning lights flashing. The second question asks the situations or conditions under which a driver can pass a school bus that is stopped on the other side of the road.

Ninety-nine percent of Ontario's drivers know that they are not allowed to pass a stopped school bus when approaching from the rear. The remaining one percent states that it is permissible to pass with extreme caution (see Table 30).

Two percent of B- or E-class drivers (school bus licenses) indicate that it depends on the situation. One percent of G-only drivers agrees that drivers are permitted to pass a stopped school bus with caution.

There are only two identifiable groups which exceed the one percent level of wrong responses. These are: drivers living in Northern Ontario (4%), and full-time students (3%).

When drivers are asked under what conditions they can pass a stopped school bus that is on the other side of the road, 33 percent give the correct response that passing is permitted when the road is divided by a median or divider and an additional nine percent indicate a freeway. Two percent indicate a highway but do not specify the type.

TABLE 30
APPROACHING A SCHOOL BUS
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Approaching from behind						
Pass with caution	1	-	-	-	1	-
Not allowed to pass	99	100	98	100	99	100
Depends	<.5	<.5	2	-	<.5	-
Other side of roadway						
Median or divider	33	53	69	59	30	56
Freeway	9	8	8	7	9	9
Highway (not specified)	2	1	-	-	2	2
No situations	49	41	29	37	51	36
DK/NA	7	2	-	-	8	-

TABLE 31
KNOWLEDGE OF INSURANCE COVERAGE
(Drivers, N=850)

	Total Drivers %
Suspended and involved in accident	
Cover all damages	4
Cover others	13
Insurance void	62
Depends	3
DK/NA	18
Drinking, at fault and involved in accident	
Cover all damages	8
Cover others	28
Insurance void	40
Depends	5
DK/NA	20

a median or divider and an additional nine percent indicate a freeway. Two percent indicate a highway but do not specify the type.

A large percentage of drivers (49%), however, do not believe that they can pass a stopped school bus under any circumstances. Seven percent are unable to respond to the question.

Seven in ten drivers with a B- or E-class license indicate that it is permissible to pass a stopped school bus when it is on the other side of the road separated by a median. No other group, either license class or demographic subgroup, approaches this percentage.

The following subgroups of drivers are unable to provide a response to the question:

- older individuals (19%);
- full-time students (15%);
- individuals who are separated, widowed, or divorced (14%); and
- retired individuals and less frequent drivers (13% each).

4.5.7 Insurance Coverage

Survey respondents are asked questions regarding the applicability of insurance coverage in two different situations. The first situation involves a person who is involved in an accident while under suspension and is at fault for the accident. The second situation involves a person who is drinking and driving and is found to be at fault.

With regard to the former situation (suspended driver), the majority of drivers (62%) believe that insurance coverage is totally void. Thirteen percent think that only others are covered, while only four percent are under the impression that all damages are covered. Eighteen percent cannot answer the question (see Table 31).

With respect to the latter situation (drinking and driving), a higher percentage believe that third parties are still covered (28%) or that all damages are covered (8%). The percentage of respondents who think that insurance coverage is void drops to 40 percent. Twenty percent are unable to respond to the question.

TABLE 32
COMPLIANCE TO THE RULES OF THE ROAD
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Same rules as for motorists	98	87	98	99	98
Different rules than motorist	1	13	2	1	2
Depends	<.5	-	-	-	-
DK/NA	-	-	-	-	-

TABLE 33
WHERE TO CYCLE ON THE ROAD
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
As close to right side of road	91	69	81	85	76
Left or centre of lane	2	5	3	2	2
On sidewalk if it exists	4	18	11	7	13
Depends	2	-	5	3	4
DK/NA	1	9	-	3	4

5.0 CYCLISTS' KNOWLEDGE OF ROAD USE

5.1 INTRODUCTION

Ontario's cyclists (composed of both exclusive cyclists and those who are motorists and cyclists) are presented with several common situations they would encounter while riding their bicycles. Each situation is described to respondents, who are then asked what they should do, based on their knowledge of the rules of the road or of cycling practices (see Appendix 3). For each situation, there is a correct or recommended cycling technique outlined in **Cycling Skills: A Guide for Teen and Adult Cyclists.** This booklet is produced and distributed by the Ministry.

Cyclists are presented with situations that measure their knowledge of:

1 - The general rules of the road, and

2 - Intersection behaviour.

5.2 RULES OF THE ROAD

5.2.1 Rules for Cyclists Versus Motorists

The rules of the road that apply to motorists also apply to cyclists even though cyclists ride non-motorized vehicles. Almost all Ontario's cyclists (98%) know that they must adhere to the same rules as motorists when using the roadways (see Table 32).

Only one percent of cyclists believes that it is not a requirement to follow the same rules as motorists. Less than one-half percent indicates that it depends on the situation.

There is one demographic group in which a higher than average percentage reports that cyclists are not required to follow the same rules as motorists. Thirteen percent of cyclists who do not speak English in their homes believe the rules followed by motorists do not apply to cyclists.

5.2.2 Position on the Roadway

Under normal conditions, cyclists should ride as close as possible to the right side of the road. Most cyclists (91%) know that this is the proper roadway position for bicycles (see Table 33).

Small percentages of cyclists indicate that it is best to ride on the sidewalk (4%) or to the left or in the centre of the lane (2%). Two percent say it depends on the circumstances and one percent cannot provide an answer to the question.

TABLE 34
CYCLING AT NIGHT
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Front and rear light/reflector	69	58	52	67	57
Front light only	13	18	15	10	20
Rear light/reflector only	9	11	17	11	15
Other light/reflector	6	9	13	10	4
DK/NA	2	4	2	1	4

TABLE 35
SIGNALLING A RIGHT TURN
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Left arm raised at elbow	59	38	46	43	24
Left arm straight out	6	11	10	14	13
Left arm pointing down	2	<.5	6	5	2
Right arm raised at elbow	4	5	4	3	4
Right arm straight out	20	29	20	19	33
DK/NA	6	18	10	14	22

Specific Subgroups of the Population

Cyclists who do not speak English at home are the least knowledgeable about cycling on roadways. Sixty-nine percent report that it is best to ride close to the right side of the road -- 22 percentage points below the provincial average. One-fifth of this group of cyclists (18%) indicates that it is best to ride on the sidewalk and nine percent cannot answer the question (see Table 34).

Cyclists who are not licensed to drive a motor vehicle are less likely to know they should be riding close to the right side of the road (76%). Cyclists in the 15 to 24 age group also have a lower than average understanding of the correct cycling position on roadways (81%). As well, individuals in these two groups are the most likely to believe that they should be riding on sidewalks where sidewalks are available.

5.2.3 Cycling at Night

Cyclists are asked what lighting or reflectors are required when cycling at night or in poor weather conditions. According to Cycling Skills, cyclists must have a white front light and a red rear light or red rear reflector on their bicycles when riding at night.

Many cyclists (69%) know that both a front light and a rear light or reflector are required at night or in poor weather. Thirteen percent of cyclists mention only a front light, while nine percent mention only a rear light or rear reflector. Six percent of cyclists report that lights or reflectors are required but they do not specify the location of this equipment. Two percent cannot answer the question (see Table 35).

Cyclists who are less likely to know about the types of lighting required at night are between 15 and 24 years of age (52% mention front and rear lighting), are non-drivers (57%), or do not speak English at home (58%).

5.3 INTERSECTION BEHAVIOUR

5.3.1 Right Turn Arm Signal

When making a right turn, cyclists should signal their intention to turn by extending their left arm out from the body raised at the elbow. Fifty-nine percent of Ontario's cyclists identify this as the correct arm signal to use when turning right.

Twenty percent of cyclists believe that the correct right turn signal

TABLE 36
SIGNALLING A LEFT TURN
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Left arm straight out	68	41	56	52	46
Left arm raised at elbow	12	14	14	19	17
Left arm pointing down	6	14	10	10	7
Right arm raised at elbow	4	<.5	2	<.5	2
Right arm straight out	2	14	3	4	2
DK/NA	5	18	6	8	17

TABLE 37
TRAFFIC SIGNALS TURNS FROM GREEN TO AMBER
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Come to a stop	95	83	90	92	89
Proceed through, pedal faster	1	5	2	1	4
Depends	3	13	8	7	7
DK/NA	-	1	-	-	-

is the extension of the right arm straight out from the body.[1] Small percentages of cyclists indicate a right turn signal is the right arm raised at the elbow (4%), the left arm straight out (6%) or the left arm pointing downward (2%). Six percent cannot answer the question (see Table 35).

Specific groups of cyclists have low levels of knowledge regarding the correct right turn signal. Cyclists who are not licensed to drive (24% mention left arm straight out) or who do not speak English at home (38%) have the lowest levels of knowledge regarding the correct right turn signal. They are followed by cyclists living in Northern Ontario (43%), individuals with less than a high school education (43%), those in the 15 to 24 age group (46%) and females (49%).

5.3.2 Left Turn Arm Signal

When making a left turn, cyclists should signal their intention to turn by extending their left arm straight out from the body. It is interesting to note that a higher percentage of cyclists know the correct signal for a right turn than for a left turn. Sixty-eight percent of cyclists can describe the correct arm signal for left turns, while 79 percent (including 20% indicating an extended right arm) can describe the proper right turn signal.

Twelve percent of cyclists incorrectly identify a left turn signal as the extension of the left arm raised at the elbow. Other incorrect responses include the left arm pointing down (6%), the right arm straight out from the body (2%) and the right arm raised at the elbow (4%). Five percent are unable to provide an answer (see Table 36).

Demographic subgroups who are unable to identify correctly a left turn signal include those who speak a language other than English at home (41%), do not have a driver's license (46%), have less than a high school education (52%), are between 15 to 24 years of age (56%) and are female (57%).

5.3.3 Traffic Signal Turns from Green to Amber

Cyclists are presented with the situation of approaching an intersection just as the traffic light turns from green to amber. They are asked whether they should accelerate and proceed through the intersection or come to a complete stop.

Almost all cyclists (95%) know that they are required to stop on an amber light. Only one percent of cyclists says it is best to proceed

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[1] On October 16, 1989, legislation was passed allowing the use of the right arm extended as an alternate right turn signal. This increases the percentage of cyclists identifying the correct signal to 79 percent.

TABLE 38
RED TRAFFIC SIGNAL
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Do not ride through intersection	97	87	97	94	93
Ride through intersection	2	13	2	4	7
DK/NA	<.5	-	2	1	-

TABLE 39
RIGHT TURN AT A RED SIGNAL OR STOP SIGN
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Move to right side of lane	3	6	3	2	2
Come to complete stop	66	52	41	60	41
Signal intention to turn	34	24	30	28	28
Shoulder check for overtaking traffic	16	29	22	20	26
Check for cross traffic	55	54	53	52	43
Check for pedestrians	18	11	15	17	7
Cycle through when clear	35	43	33	27	15
Return to right side of lane after turn	<.5	-	-	-	-
Only other responses	2	-	5	1	9
DK/NA	1	13	2	3	7

through the intersection, while three percent think it depends on the situation (see Table 37).

The majority of cyclists across all demographic subgroups give the correct answer to this question. The one exception occurs among cyclists who do not speak English at home. Eighty-three percent of this group believe that cyclists should stop at the intersection, and 13 percent believe that it depends on the circumstances.

5.3.4 Red Traffic Signal

Almost all cyclists (97%) know that cyclists are not allowed to pass through an intersection on a red light even if there is no other traffic or pedestrians. Only two percent of cyclists believe it is permissible. Less than one-half percent of respondents is unable to provide an answer (see Table 38).

Cyclists who do not speak English at home have a lower level of knowledge regarding the meaning of a red traffic signal. Although 87 percent of this group indicate that they should stop at a red light, 13 percent report that cyclists can ride through an intersection on a red signal when there is no other traffic.

5.3.5 Right Turn at a Red Signal or Stop Sign

Recommended cycling techniques when making a right turn at a red light or stop sign involve several steps. First, cyclists should position themselves in the right side of the lane then come to a complete stop at the intersection. They should signal their intention to turn and should look over their shoulders for overtaking traffic while watching out for cross traffic and pedestrians. When the intersection is clear, cyclists should complete their turn by returning to the right side of the lane.

Almost all cyclists (97%) can identify at least one of the previously mentioned steps. Eighty-five percent can identify three or more of the previously mentioned eight steps (see Table 39).

Examining each item separately, cyclists are most likely to mention coming to a complete stop (66%) and checking for cross traffic (55%), followed by signalling the intention to turn (34%) and cycling through the intersection when it is clear of traffic (35%).

Ontario's cyclists are least likely to mention getting into the right side of the lane before turning (3%), shoulder checking for overtaking traffic (16%), checking for pedestrians (18%) and returning to the right side of the lane after the turn (less than 1%).

There are three demographic groups that have a lower than average understanding of the correct technique involved in turning right at a red light or stop sign. Cyclists who do not have a driver's license are less likely than others to mention coming to a complete stop

TABLE 40
CYCLISTS VERSUS MOTORISTS AT UNMARKED INTERSECTION
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Right-of-way....					
Car from right	62	32	50	52	37
Car from left	9	14	20	18	28
Car from right or left	15	28	14	12	17
Cyclist from right or left	5	18	7	6	7
DK/NA	8	9	8	10	9

TABLE 41
USE OF PEDESTRIAN CROSSING
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Walk bicycle through crossing	97	100	98	97	91
Ride cautiously through crossing	3	-	2	3	9
DK/NA	-	-	-	-	-

(41%), checking for cross-traffic (43%) and cycling through when the intersection is clear (15%). Making a complete stop is mentioned less often by those 15 to 24 years of age (41%) and those who do not speak English at home (52%). Thirteen percent of this latter group are unable to provide an answer to the question.

5.3.6 Cyclists and Motorists Meeting at Unmarked Intersections

Cyclists are asked to imagine approaching an intersection that has neither traffic lights, stop signs nor yield signs. At the same time, there is a car approaching along the cross street. Respondents are asked the circumstances under which the driver of the car has the right-of-way.

Six in ten cyclists (62%) provide the correct response -- the car has the right of way when it is approaching from the cyclist's right. A smaller percentage of cyclists believe the car always has the right-of-way (15%) or that it has right-of-way when approaching from the left (9%). Five percent say the cyclist has the right-of-way when the car is approaching from any cross street. Eight percent cannot answer the question (see Table 40).

Respondents who are least likely to know when a cyclist must yield to a car at an unmarked intersection are over-represented among those who speak a language other than English at home and among respondents who are not licensed to drive. Thirty-two percent of the former group (non-English) and 37 percent of the latter group (non-drivers) report that the car coming from the right has the right-of-way. Also, one-fifth of the non-English group (18%) believes the cyclist always has the right-of-way over a motorist approaching along the intersecting street.

Other cyclists with a lower than average knowledge of the right-of-way at unmarked intersections include individuals who are between 15 to 24 years of age (50% indicate the car from the right) and those with less than a high school education (52%).

5.3.7 Use of Pedestrian Crossings

Cyclists are presented with two plausible ways in which to use a pedestrian crossing or crosswalk. Almost all cyclists (97%) give the correct response (dismounting and walking.) Only three percent of cyclists give the incorrect response (remaining on their bicycles and proceeding cautiously.)[2] (See Table 41)

Cyclists from all demographic subgroups know the proper technique for using a pedestrian crossing. Those who do not hold a driver's license

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[2] On October 16, 1989, legislation passed disallowing cyclists to ride across crossovers or crosswalks. Prior to this, it was a permissible, but unwise, practice.

TABLE 42
SAFETY PROCEDURES: CARS TURNING RIGHT
(Cyclists, N=449)

	Total Cyclists %	Non-Eng at Home %	15-24 Years %	< High School %	Non-Drivers %
Stay out of motorist's blind spot and follow behind cars	1	-	<.5	-	-
Stay out of motorist's blind spot only	2	-	-	3	2
Follow behind cars only	18	9	17	16	17
Only other responses	59	53	57	52	48
DK/NA	20	38	26	29	33

are, however, more likely to answer this question incorrectly. Nine percent of non-licensed cyclists believe it is permissible to ride cautiously across a pedestrian crosswalk.

5.3.8 Safety Procedures: Cars Turning Right

Cars turning right at an intersection present a potentially hazardous situation for cyclists. Cyclists are asked to describe the best procedure for dealing with this situation. The recommended cycling technique is to stay out of the motorist's blind spot and to follow behind as opposed to alongside the car.

Only one percent of cyclists can identify the two precautionary steps for safely negotiating intersections where cars turn right (see Table 42). Eighteen percent mention staying behind a car and two percent indicate staying out of the motorist's blind spot.

One-fifth of cyclists cannot give an answer to this question.

All demographic subgroups of cyclists have relatively low levels of knowledge about dealing with cars turning right. Cyclists who do not speak English at home have especially low levels of knowledge. Only nine percent of this group indicate following behind a car and no members of this group mentions staying out of the motorist's blind spot.

TABLE 43
WALKING ALONGSIDE THE ROADWAY
(Pedestrians, N=615)

If no sidewalks...	Total Pedest %	Non-Eng at Home %	< High School %	< 10K Pop'n %	15-24 Years %	North Ontario %
Walk facing traffic	89	77	85	92	69	93
Walk with traffic	10	20	13	7	30	7
DK/NA	1	<.5	1	2	-	-

6.0 PEDESTRIANS' KNOWLEDGE OF ROAD USE

6.1 INTRODUCTION

This report section deals with traffic situations commonly faced by pedestrians. After each situation is described to respondents, they are asked what they should do based on their knowledge of the rules of the road and recommended pedestrian practices.

Responses to these situations measure pedestrians' knowledge of:

1 - Walking alongside the roadway;

2 - Crossing roadways; and,

3 - Dealing with traffic signals.

Although all road users qualify as pedestrians, only 61 percent of road users were asked the pedestrian questions. Limiting the number of respondents answering this section helped to shorten the average length of interview, particularly among drivers. This sample of road users is composed of all exclusive pedestrians (those who neither drive nor cycle), all cyclists and a random selection of approximately one-half of drivers.

6.2 WALKING ALONGSIDE THE ROADWAY

Pedestrians are asked where they should walk when there are no sidewalks: 1) facing oncoming traffic; or 2) walking with traffic. (The former is the correct response.)

Most pedestrians (89%) know that they should walk facing the traffic. Ten percent of pedestrians give the incorrect response. One percent of respondents cannot answer the question (see Table 43).

There are two demographic subgroups that display a lower than average level of knowledge regarding where to walk. Pedestrians who are 15 to 24 years of age (69% indicate facing the traffic) and those who do not speak English at home (77%) are less likely to know they should walk facing the oncoming traffic.

6.3 CROSSING ROADWAYS

6.3.1 Crossing Where There Are No Intersections, Crosswalks or Signals

Pedestrians are asked what procedure they should follow when crossing a road between intersections where there are no crosswalks or traffic signals. The recommended technique is to choose a location where both directions of traffic can be seen and where motorists can see

TABLE 44
CROSSING BETWEEN INTERSECTIONS, CROSSWALKS OR SIGNALS
(Pedestrians, N=615)

	Total Pedest %	Non-Eng at Home %	< High School %	< 10K Pop'n %	15-24 Years %	North Ontario %
Look both ways	80	61	81	81	80	81
Cross quickly	11	5	12	6	11	9
Stand where you can see traffic both ways	7	13	4	9	4	5
Stand where motorist can see you	<.5	-	-	-	1	-
Cross only if you can get all the way across	7	5	8	8	1	4
Only other responses	11	15	11	9	8	12
DK/NA	2	12	4	3	4	2

TABLE 45
PEDESTRIANS CROSSING VERSUS ONCOMING MOTORIST
(Pedestrians, N=615)

	Total Pedest %	Non-Eng at Home %	< High School %	< 10K Pop'n %	15-24 Years %	North Ontario %
Pedestrians cross at risk	61	52	63	56	56	42
Motorists must stop	30	25	24	32	32	39
Depends	7	16	9	7	6	14
DK/NA	3	7	5	5	6	4

pedestrians. Pedestrians should look both ways for oncoming traffic and cross quickly, making sure they do not have to stop for traffic while standing in the middle of the road.

Most pedestrians (85%) can identify at least two steps involved in crossing a road between intersections. While 80 percent indicate looking both ways before crossing, only a small percentage of pedestrians mentions crossing quickly (11%), crossing where traffic can be seen in both directions (7%), or crossing only when it is possible to get all the way across (7%). Less than one percent mentions crossing at a location that allows the pedestrian to be seen by motorists (see Table 44).

Two specific subgroups are less likely to mention looking both ways before crossing. Although 61 percent of pedestrians who do not speak English at home and 60 percent of exclusive pedestrians indicate looking both ways before crossing, these figures are approximately 20 percentage points below the provincial norm.

6.3.2 Pedestrians Crossing Versus Oncoming Motorists

Pedestrians are asked whether pedestrians or vehicles have the right-of-way when pedestrians cross a road with no intersections, crosswalks or traffic signals. Sixty-one percent indicate correctly that vehicles do in fact have the right-of-way. Thirty percent, however, believe that traffic is required to stop for pedestrians (see Table 45).

Seven percent believe it depends on the situation and three percent cannot answer the question.

Residents of Northern Ontario are split regarding who has the right-of-way in this situation. Forty-two percent indicate that pedestrians cross at their own risk, while 39 percent indicate that motorists must stop for crossing pedestrians.

6.3.3 Using Pedestrian Crossings

Pedestrians are asked to describe the correct procedure for using pedestrian crossings. Pedestrians should point to show their intention to cross then wait for traffic in both directions to stop. They should walk across quickly while continuing to point and to watch for oncoming traffic.

Three-quarters of respondents mention at least one of these steps for using a pedestrian crossing. Fifty-two percent know that they should point to show their intention to cross and 50 percent know that they should wait for traffic in both directions to stop. Responses mentioned less often include watching for traffic while crossing (12%), crossing quickly (7%) and continuing to point while crossing (4%) (see Table 46).

TABLE 46
USING PEDESTRIAN CROSSING
(Pedestrians, N=615)

	Total Pedest %	Non-Eng at Home %	< High School %	< 10K Pop'n %	15-24 Years %	North Ontario %
Point to indicate intention to cross	52	47	39	31	48	29
Wait for traffic to stop both ways	50	48	35	41	41	35
Watch for traffic while crossing	12	6	9	10	15	12
Cross quickly	7	7	5	3	8	4
Point while crossing	4	5	5	3	3	-
Only other responses	18	17	25	23	23	24
DK/NA	7	17	15	14	8	19

TABLE 47
FLASHING GREEN SIGNAL
(Pedestrians, N=615)

	Total Pedest %	Non-Eng at Home %	< High School %	< 10K Pop'n %	15-24 Years %	North Ontario %
Wait	65	59	57	57	73	67
Proceed	29	38	34	35	25	27
Depends	1	2	3	3	-	2
DK/NA	4	<.5	5	6	1	4

People who are less likely to know how to negotiate a pedestrian crossing correctly are identified as Northern Ontario residents, those who live in smaller communities or those who have not completed high school. They are less likely than other Ontarians to point or to wait for both directions of traffic to stop.

6.4 TRAFFIC SIGNALS

Pedestrians are presented with the situation of having to cross an intersection that has traffic signals but does not have pedestrian signals. Respondents are asked whether they are permitted to cross when the green traffic signal is flashing.

Two-thirds of pedestrians (65%) correctly report that they must wait for a solid green signal. Twenty-nine percent, however, state incorrectly that pedestrians are permitted to cross when the green light is flashing. Four percent of pedestrians cannot answer this question (see Table 47).

Knowledge about a flashing green signal varies across demographic subgroups of pedestrians. Higher than average understanding of the signal is found among those in the 15 to 24 age group (73% indicate that they should wait) and among Metro Toronto residents (73%).

Alternatively, respondents who are less likely to give the correct response are between 45 to 64 years of age (51% say wait), have less than a high school education (57%), live in smaller communities (57%) or live in Western Ontario (55%).

TABLE 48
PERCENTAGE WHO HAVE TAKEN FORMAL DRIVER EDUCATION
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle* %
Course at secondary school or college	25	19	21	32	25	35
Lessons from driving instructor	49	27	54	45	51	41
Respondents who have lessons from instructor....						
Classroom instruction (N=416)	60	78	78	83	58	69

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Courses at secondary school or college	25	48	8	21	27	29
Lesson from driving instructor	49	62	36	55	68	67
Respondents who have lessons from instructor...						
Classroom instruction (N=416)	60	77	28	54	48	71

* May not refer to learning to drive a motorcycle if respondent has an additional endorsement.

7.0 COMMUNICATIONS

7.1 DRIVER EDUCATION

7.1.1 Introduction

This section of the report examines how Ontario's drivers have learned to drive. We are concerned with both formal and informal training. Formal driver training includes enrolling in driver education courses offered at secondary schools or community colleges, or taking lessons from a registered driving instructor. Informal driver training involves learning to drive from instruction or advice given by family members or friends, as well as being self-taught.

The type of driver training a person receives may influence the extent to which that driver understands the rules of the road or recognizes correct driving techniques. Drivers who have received formal instruction should, theoretically, be more knowledgeable about correct road use than those who have learned to drive informally.

Previous analyses have identified drivers with lower than average levels of knowledge about correct driving practices. These groups are:

1 - Drivers who usually do not speak English in their homes;

2 - Drivers in the youngest age group (16 to 24 years);

3 - Drivers in the oldest age group (65 years or older);

4 - Drivers who reside in Metro Toronto; and,

5 - Drivers who drive less frequently than average.

7.1.2 Formal Driver Training

Overall Responses

Approximately one-half (54%) of Ontario's drivers has taken some type of formal driver training, either from an instructor or from driver training programmes at school. Twice as many drivers have taken lessons from a driving instructor (49%) than have taken a formal driver education course at a secondary school or community college (25%). One quarter of Ontario's drivers have taken both driving lessons and a formal driver education course.

Sixty percent of drivers who have received either type of formal driving instruction also received classroom instruction (see Table 48).

TABLE 49
PERCENTAGE WHO HAVE LEARNED TO DRIVE INFORMALLY
(Drivers, N=850)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle* %
Lessons from family or friends	41	59	37	42	39	43
Self-taught	3	6	-	4	3	1
Army or job experience	1	2	-	1	1	1
On farm, driving tractor	1	1	2	1	1	-

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Lessons from family or friends	41	23	46	37	23	25
Self-taught	3	4	7	3	1	5
Army or job experience	1	-	3	1	2	5
On farm, driving tractor	1	-	3	1	1	2

* May not refer to learning to drive a motorcycle.

By License Class

Drivers who hold a B- or E-class license (54%) are more likely than individuals with other classes of licenses to have taken lessons from a driving instructor. They are followed by G-only drivers (51%), C- or F-class (45%) and M-class (41%) drivers. The number of A- or D-class license holders who have been taught by a driving instructor is 22 points below the provincial average (27%).

Of those who have been taught by an instructor, C- or F-class drivers (83%) and A-, D-, B- and E-class drivers (78%) are the most likely to have received accompanying classroom instruction.

Individuals holding an M-class (35%) or C- or F-class (32%) are more likely than others to have participated in driver training courses offered at a high school or community college. Alternatively, A- or D-class (19%) and B- or E-class (21%) license holders are the least likely to have taken driver education classes.

By Target Subgroups

Respondents who have taken a driving course at a high school or community college are most likely to be non-working students (71%) or between 16 and 24 years of age (48%).

People who have taken lessons from a driving instructor come from a variety of backgrounds. They include non-working students (73%), individuals in the 16 to 24 age group (62%), Metro Toronto residents (68%), those who do not speak English at home (67%), and females (58%).

Individuals most likely to have received classroom instruction as part of their driver training are identified as young drivers (77%) and those who do not speak English at home (71%). Compared to those living elsewhere in the province, Metro Toronto residents are less likely to have received lessons in the classroom (48%).

Drivers in the oldest age group, 65 years or older, are less likely to have participated in any kind of formal driver education or training.

7.1.3 Informal Means of Learning To Drive

Overall Responses

Forty-six percent of Ontario's drivers have received only informal driver training. In most cases (41%), this training has involved lessons given by family members or friends (see Table 49).

Other types of informal instruction are reported by only a very small percentage of drivers. Five percent of drivers learned to drive

TABLE 50
PERCENTAGE RECALLING SAFE DRIVING PROMOTION
(Drivers, N=850)

Saw or heard in past 6 months	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Television ads	61	58	64	61	60	57
Newspaper or magazine ads	36	49	39	37	36	30
Poster, billboard or transit ads	34	48	35	43	33	35
Radio ads	33	40	37	33	33	28
Booklets or pamphlets	28	40	45	46	26	33

Saw or heard in past 6 months	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Television ads	61	65	61	66	55	55
Newspaper or magazine ads	36	34	38	41	25	48
Poster, billboard or transit ads	34	43	27	41	35	44
Radio ads	33	44	28	33	29	40
Booklets or pamphlets	28	44	25	33	21	34

through self-instruction (3%), army or job experience (1%) or working on the farm or operating a tractor (1%).

By License Class

Compared to other drivers, a significantly higher percentage of A- or D-class license holders have learned to drive by taking informal driving lessons from family and friends (59%). As well, A- and D-class drivers are somewhat more likely to be self-taught (6%). The percentage receiving instruction from family and friends is lowest among B- or E-class drivers (37%) and G-only class license holders (39%).

By Target Subgroups

Drivers 65 years of age or older are more likely then other drivers to have learned to drive informally -- from family or friends (46%), through self-instruction (7%), through army or job experience (3%) or by working on a farm or on a tractor (3%).

There is also a relatively high percentage of individuals who have learned to drive informally among the 45 to 64 age group (56%), and among residents of communities less than 10,000 (59%), residents of Northern Ontario (56%) and individuals with less than a high school education (54%).

7.2 SAFE ROAD USE PROMOTIONS

7.2.1 Introduction

The following report section examines Ontario road users' exposure to and recall of safe road use promotions. The purpose of this analysis is to identify which media -- television advertisements, radio commercials, newspaper or magazine ads, booklets or pamphlets, and posters, billboards or public transit ads -- might have the greatest impact on safe use of roads.

Given the unequal distribution of and overlaps among the three road user groups, it was necessary to establish quotas for each group. Random samples of drivers, cyclists, and pedestrians were questioned with regard to promotions relevant to their respective group.

7.2.2 Safe Driving Promotions

Eight of ten Ontario drivers (79%) have seen or heard a safe driving promotion in the past six months. Advertisements appearing on television have the highest reported awareness levels. Sixty-one percent of drivers recall seeing a television commercial encouraging safe driving practices (see Table 50).

TABLE 51
PERCENTAGE RECALLING SAFE CYCLING PROMOTIONS
(Cyclists, N=154)

Saw or heard in past 6 months	Total Cyclists %	15-24 Years %	< High School %	Non-Drivers %
Booklets or pamphlets	34	44	45	46
Newspaper or magazine ads	26	25	30	33
Poster, billboard or transit ads	23	44	33	28
Radio ads	21	24	20	22
Television ads	20	30	28	26

TABLE 52
PERCENTAGE RECALLING SAFE WALKING PROMOTIONS
(Pedestrians, N=108)

Saw or heard in past 6 months	Total Pedest %
Television ads	21
Newspaper or magazine ads	20
Booklets or pamphlets	18
Poster, billboard or transit ads	14
Radio ads	11

TABLE 53
PERCENTAGE AWARE OF MTO INVOLVEMENT

Distributed, produced or sponsored by MTO...	Drivers (N=206)	Cyclists (N=52)	Pedestrians (N=19)
Booklets or pamphlets	71	67	71
Posters, billboards or transit ads	60	51	46

Between 25 and 40 percent of drivers recall safe driving promotions in newspapers or magazines (36%), on posters, billboards or the transit (34%), on the radio (33%) and in booklets or pamphlets (28%).

Based on the previous analyses of driver knowledge, five driver subgroups have been identified as having lower levels of knowledge about correct road practices. The following analysis of safe driving promotions places particular emphasis on the strategies by which to reach:

1 - Drivers who usually do not speak English in their homes;

2 - Drivers between 16 and 25 years of age;

3 - Drivers 65 years of age or older;

4 - Drivers who reside in Metro Toronto; and,

5 - Drivers who drive less frequently than average.

Drivers who do not usually speak English at home are more likely to recall seeing safe driving commercials on television (55%) than through other media. As well, members of this target subgroup report relatively high levels of recall for safe driving advertisements placed in newspapers or magazines (48%), posters, billboards or transit ads (44%) and on the radio (40%). Booklets or pamphlets have the lowest impact (34%).

Young drivers between 16 and 24 years of age report very high awareness of television advertising (65%). Awareness of promotions on the radio (44%), on posters or billboards (43%) and in booklets or pamphlets (44%) is also high. Recall is lowest for newspaper and magazine promotions (34%).

Commercials on television are the most effective method by which to reach elderly drivers. Sixty-one percent of this group recall seeing safe driving commercials on television. Other media tend to be less effective in reaching this target segment.

Metro Toronto drivers are likely to recall safe driving promotions carried on television (55%). Posters and billboards are also relatively effective media.

Two-thirds of less frequent drivers — those who do not drive everyday — report seeing safe driving promotions on television (66%). Television is followed by newspapers, magazines, posters and billboards (41%).

TABLE 54
HOW TO IMPROVE DRIVING SKILLS
(Drivers, N=741)

	Total Drivers %	A or D class %	B or E class %	C or F class %	G only class %	Motor cycle %
Ministry of Transportation	66	67	81	72	65	72
Driving school	32	31	19	24	33	23
CAA, OML, motor club	8	4	5	-	9	6
Police	5	3	3	6	4	1
Family, friends	4	2	-	-	4	2
Books on driving	3	5	-	5	2	2
DK/NA	3	4	5	4	3	9

	Total Drivers %	15-24 Years %	65+ Years %	Less Freq %	Metro Toronto %	Non-Eng at Home %
Ministry of Transportation	66	61	59	59	67	65
Driving school	32	34	31	36	37	27
CAA, OML, motor club	8	5	8	6	11	2
Police	5	9	6	5	5	7
Family, friends	4	2	3	6	7	-
Books on driving	3	2	3	5	2	3
DK/NA	3	2	4	3	<.5	10

7.2.3 Safe Cycling Promotions

Six in ten of Ontario's cyclists (62%) recall seeing or hearing a safe cycling promotion in the past six months. Promotional materials appearing in booklets or pamphlets have the highest recall levels. One-third of cyclists (34%) report seeing booklets or pamphlets promoting safe cycling practices (see Table 51).

Between 20 and 30 percent of cyclists recall seeing or hearing messages in newspapers or magazines (26%), on posters or billboards (23%), on the radio (21%), and on television (20%).

The previous analyses of road use and cycling practices identify several groups with low levels of knowledge. They are:

1 - Cyclists between 15 and 24 years of age;

2 - Cyclists who have less than a high school education; and,

3 - Cyclists who do not drive a motorized vehicle.

Due to the small number of cyclists who do not speak English at home answering questions regarding safe cycling promotion, they have been omitted from the target group analysis.

The three subgroups who are the least knowledgeable about correct cycling techniques are most likely to recall booklets or pamphlets promoting safe cycling. Forty-four percent in the 15 to 24 age group, 45 percent with less than a high school education, and 46 percent of non-drivers recall seeing promotional booklets or pamphlets.

Poster, billboard, or transit advertising has the greatest awareness levels among the youngest cyclists (44%) and respondents with less than a high school education (33%). Non-drivers have moderate levels of awareness of newspaper or magazine ads regarding safe cycling (33%). All target subgroups report below average recall of radio and television commercials.

7.2.4 Safe Pedestrian Practices

In contrast to all other road users, pedestrians are the least likely to report seeing or hearing promotions directed at the safe use of roads. Forty-one percent of pedestrians recall seeing or hearing a promotion for safe walking practices in the past six months.

Pedestrians report seeing safety promotions on television (21%), in newspapers or magazines (20%), and in booklets or pamphlets (18%). They are less likely to be aware of safety promotions appearing on posters, billboards, or transit ads (14%), or on the radio (11%) (see Table 52).

TABLE 55
HOW TO IMPROVE CYCLING SKILLS
(Cyclists, N=154)

	Total Cyclists %	15-24 Years %	< High School %	Non-Drivers %
Ministry of Transportation	53	49	41	48
Police	24	18	25	26
Ont/Can. cycling associations	8	9	3	7
Bicycle shop	7	6	3	4
Driving school	7	10	14	11
CAA, OML, motor club	3	3	3	2
DK/NA	11	10	17	7

7.2.5 Awareness of Ministry of Transportation Activities

Recognition of the Ministry's involvement in promoting safe road use is heavily concentrated in the area of producing and distributing printed materials. Seventy-one percent of drivers, 67 percent of cyclists and 71 percent of pedestrians who recall seeing booklets or pamphlets on safe road use also recall the Ministry's involvement in the promotion or publication (see Table 53).

7.3 WHERE TO OBTAIN INFORMATION

7.3.1 Drivers

When asked where or to whom they would turn for information and advice on improving driving or cycling skills, 66 percent of drivers indicate that they would turn to the Ministry of Transportation. Half as many (32%) indicate that they would turn to a driving school (see Table 54).

Sources of information indicated less frequently are CAA, OML or other motoring associations (8%), the police (5%), family or friends (4%), and books on driving (3%).

7.3.2 Cyclists

One-half of sampled cyclists (53%) indicate the Ministry as a source of information and assistance. This is followed by the police at 24 percent (see Table 55). It is noteworthy that the number of cyclists indicating the Ministry is 13 percentage points lower than that of drivers responding to the same question.

Other sources of information indicated by cyclists include cycling associations (8%), bicycle shops (7%), driving schools (7%), and motoring associations (3%). Eleven percent of cyclists (as compared to 3% of drivers) are uncertain with regard to sources of information concerning road use skills.

8.0 SUMMARY AND DISCUSSION

8.1 A QUESTION OF STANDARDS

The overall findings from this research indicate that the levels of road use knowledge are moderate to high among Ontario's drivers, cyclists and pedestrians. For example, we have found that 96 percent of Ontario's drivers correctly respond that motorists who are turning at an intersection on a green signal must first yield to pedestrians who are also crossing with the light.

Nevertheless, it might be argued that anything less than 100 percent correct knowledge is a potential threat to safety on Ontario's roads. One person among the four percent of drivers who do not say that they must yield to pedestrians may conceivably be the cause of a future accident.

The interpretation of the findings from this study should take into account the following.

1 - It is almost impossible for 100 percent of any population to know and understand a fact, rule or regulation. In order for 100 percent of the population to give a correct response, the correct information would have had to reach 100 percent of the population.

2 - Road users are exposed differentially to the situations in which their knowledge deficiencies are potentially hazardous. For instance, an individual with a knowledge deficiency is much more at risk to himself or herself and other road users if exposure levels are also very high.

3 - Where road users are tested before being licensed, a score of less than 100 percent still leads to qualification.

4 - What is the cost of an improvement in road use knowledge? Part of the answer to this question lies in the cost of reaching the segments of the road user population who possess knowledge deficiencies.

8.1.1 Gaps in Road Use Knowledge: The Young Road User

Young road users — whether they are motorists or cyclists — are more likely than older individuals to possess gaps in their knowledge. For young drivers, this is somewhat surprising because they are more likely than others to have taken formal driver training accompanied by classroom instruction.

The findings from this study appear to indicate that the formal training process is selective in the types of safe road use knowledge that is being transmitted successfully to students. For example,

driver training does a good job instructing young drivers how to get on a freeway and how to gauge a safe following distance behind another vehicle.

Nevertheless, formal driving training is less successful in the areas of road safety that are learned by actually driving and that are gained through experience. While driver training gives young drivers a head start, knowledge levels would appear to increase over time as young drivers encounter more situations on the road. This would also help to explain why less frequent drivers score lower than more frequent drivers. Situations encountered at intersections appear to be a general area where actual driving experience is important.

The age and experience relationship is also important in explaining the knowledge gap exhibited by young cyclists. Older cyclists, compared to younger cyclists, simply have encountered more situations on the road. Moreover, the total experience of using roads as a cyclist and as a driver leads to greater knowledge about cycling safely.

Formal cyclist training for students, similar to driver training, may help to close some of the knowledge gaps for young cyclists. Formal training would serve as a catalyst for the experiential learning that is to follow.

8.1.2 Gaps in Road Use Knowledge: People Who Do Not Speak English at Home

A persistent finding from this study is that Ontarians who do not speak English in their homes have lower levels of road use knowledge compared to the rest of the population. These respondents are at least bilingual because the interview was carried out in English only.

Due to the communications focus of this project, language in-use rather than ethnocultural origin or generational status was measured. Language in-use may be regarded as a subset of the more inclusive concept -- ethnocultural origin. A portion of all the individuals from a particular ethnocultural background will be able to speak the language of their ethnic heritage. In this respect, language in-use is probably closer to the concept of generational status. People who speak a language other than English in their homes are probably first or second generation Canadians.

One of the interpretations of these findings is that this group of respondents may be more likely to misinterpret the interview questions because of language difficulties. Although they know the correct answers, they give incorrect responses in the interview situation because they do not understand the question. The consistency of the incorrect responses given by the respondents who do not speak English at home would appear to lessen the support for this interpretation. If langauge difficulties were producing the wrong answers, there would be

a random pattern of incorrect responses (like guessing on an exam) rather than such a consistent pattern of findings.

The perplexing aspect of lower knowledge levels of this group of road users, especially among drivers, is that a high proportion has taken some form of driver instruction or training. This leads to several interpretations.

1 - The driver training that many of these respondents has received may be substandard regarding some aspects of road use but good enough to pass the Driver's Examination.

2 - The instruction is effective in raising road use knowledge to passing levels but not to the levels of the rest of the population.

3 - Instruction is not being offered in other languages so that these individuals are not getting the full benefit of driver training.

Lower knowledge levels of road users who do not speak English at home can be directly addressed by the distribution of information in languages other than English and French. In particular, ethnic media such as radio, television, and newspapers can be used to deliver safe road use messages.

Using ethnic media to disseminate safe road use messages may have the added benefit of improving knowledge levels in the Metro Toronto area. This is because Metro Toronto contains many individuals whose first language is a language other than English.

8.1.3 Gaps in Road Use Knowledge: The "G-Only" License Holders

Drivers who hold a G-class license and no other endorsements tend to be less knowledgeable than other drivers. The reason that this group is important is that they represent 90 percent of Ontario's drivers. This means that each percentage point of G-only drivers with incorrect knowledge represents 61,182 individuals.

G-only license holders also tend to be the least experienced drivers in the province. The explanation of the knowledge deficiencies among G-only drivers would parallel the reasons why young drivers do not score as well as older, more experienced drivers. Practical experience, that is learning through actual experience, seems to be one of the important methods by which drivers gain road use knowledge.

Although experience is undoubtedly the best means of improving knowledge levels among G-class drivers, safe driving promotions through mass media such as television, radio, and daily newspapers might effectively augment this experience.

8.2 SUMMARY OF FINDINGS

8.2.1 Drivers

Ontario's drivers are generally well-informed about the correct ways to negotiate intersections, the meaning of traffic signals, the interpretation of painted lane markings, the proper method by which to pass a motorcyclist, the use of seatbelts and what to do when encountering a school bus. Drivers, however, are less well-informed about how to gauge correctly a safe following distance behind another vehicle and how to pass safely on two-lane highways.

8.2.2 Cyclists

The general finding is that young cyclists have lower levels of knowledge about safe cycling practices than older individuals. In part, this is explained by their lack of experience using roads, in general, and encountering traffic, in particular. Formal instruction would assist young cyclists in gaining information about safe cycling practices.

All cyclists, whether young or old, would benefit from learning the correct technique for negotiating turns at intersections. This would include correct positioning relative to other traffic and the use of hand and arm signals.

8.2.3 Pedestrians

There are several areas in which pedestrians show some vulnerability. Very few respondents indicate that it is important to position themselves where motorists can see them clearly when crossing a road where there are no intersections or crossings. Pedestrians do not always know that they should point when using a pedestrian crossing. Some people believe they can cross at an intersection when there is a flashing green signal instead of waiting for a solid green signal.

8.3 FUTURE RESEARCH

This survey was intended to provide baseline measurements against which future road safety findings can be compared. Given specific initiatives to increase road use knowledge, it will be important to evaluate the success of these initiatives.

The nature of this survey and the findings that have been generated indicate that specific groups of individuals may require more intensive study. These groups are:

1 - Young drivers;

2 - People who come from minority ethnocultural backgrounds; and

3 - Individuals who possess an M-class license and no other endorsement.

This study has demonstrated there is a connection between exposure and knowledge. In the future, a more rigorous approach to the kinds of exposure and the degree of knowledge will help to priorize safe road use promotional activities.

Finally, there is a need to clarify further the relationship between knowledge, attitudes towards the use of this knowledge and actual behaviour on roads. While knowledge is a starting point, it is uncertain how this knowledge is being used and what importance is being placed on it.

APPENDIX 1

METHODOLOGY

Introduction

Environics Research Group was retained by the Ontario Ministry of Transportation, Safety and Coordination Branch, to undertake a province-wide study to measure the levels of road use knowledge among drivers, cyclists and pedestrians. In total, 1,003 Ontarians (weighted N=1,002), 15 years of age and older, were surveyed in the Spring of 1989.

Questionnaire Design

The questionnaire utilized in this study was designed by the project team in consultation with representatives of the Ministry of Transportation. Whenever possible, aspects of similar projects undertaken in the past were incorporated into the questionnaire.

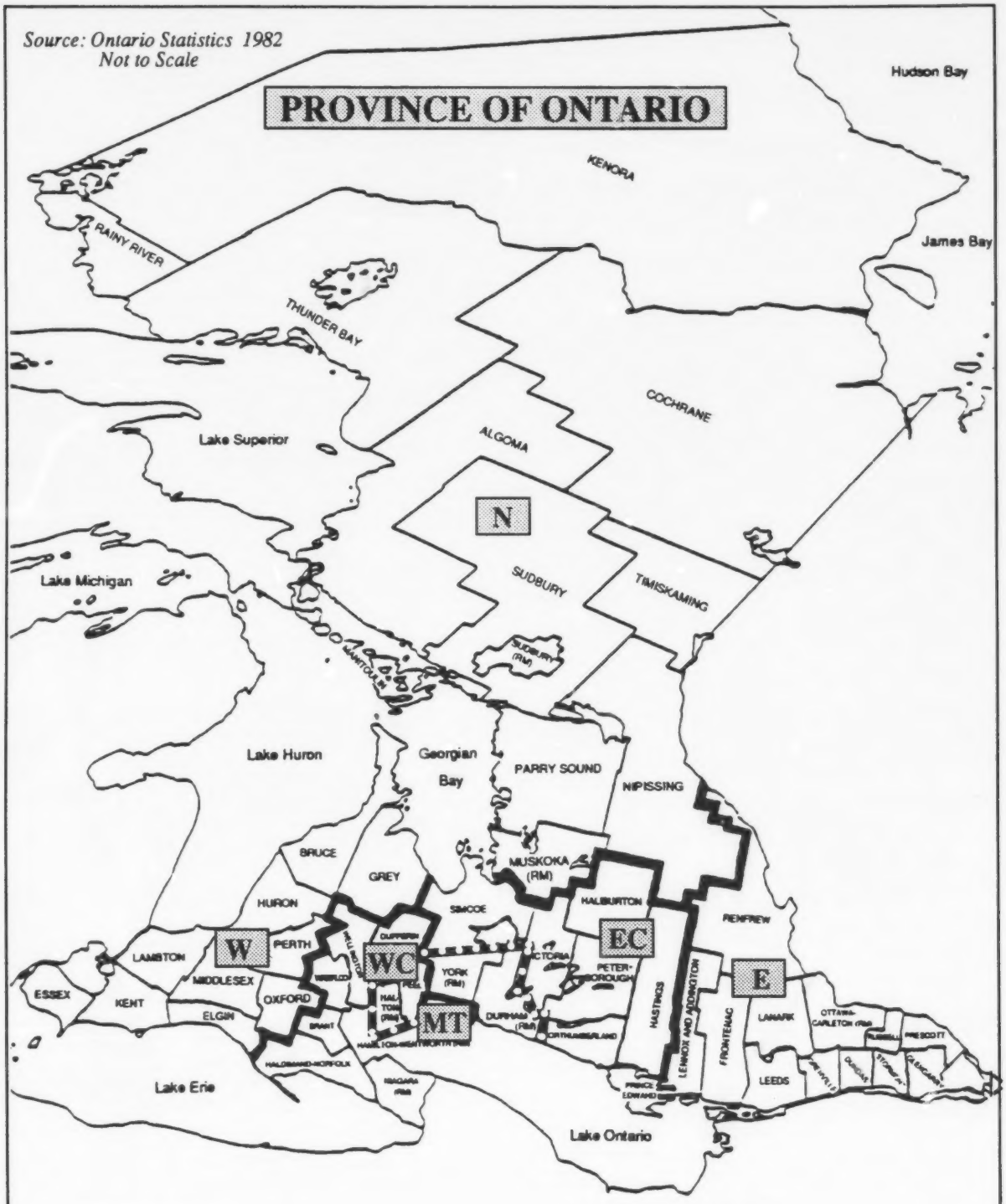
Sample Selection

The study involved the use of a multi-stage sampling procedure to complete a total of 1,003 phone calls in two waves of 753 and 250 phone calls respectively. In the case of the initial wave (of 753), telephone numbers were drawn randomly from across the province using the Waksberg-Mitofsky procedure. This method of sample selection is equivalent to random digit dialling (RDD).

A total of 4,956 telephone numbers were generated for this study, of which a total of 162 remained unallocated.

The sample was drawn proportionate to the population of six regions within the province. It was then stratified in proportion to the populations of five community size groups within each of the regions. The breakdown is as follows:

Metropolitan Toronto (25%)*		
	Community size 1 (100,000+)	100%
Eastern Ontario (12%)*		
	Community size 1 (100,000+)	44%
	2 (30,000 - 99,999)	12%
	3 (10,000 - 29,999)	6%
	4 (5,000 - 9,999)	5%
	5 (under 5,000)	33%



REGIONS:

MT	Metro Toronto
E	Eastern Ontario
EC	East Central Ontario
WC	West Central Ontario
W	Western Ontario
N	Northern Ontario

BOUNDARIES:

- County, District, Regional Municipality
- Region
- Greater Toronto Area

Central East Ontario (13%)*		
Community size	1 (100,000+)	11%
	2 (30,000 - 99,999)	41%
	3 (10,000 - 29,999)	9%
	4 (5,000 - 9,999)	2%
	5 (under 5,000)	37%
Central West Ontario (25%)*		
Community size	1 (100,000+)	52%
	2 (30,000 - 99,999)	25%
	3 (10,000 - 29,999)	16%
	4 (5,000 - 9,999)	1%
	5 (under 5,000)	6%
Western Ontario (15%)*		
Community size	1 (100,000+)	37%
	2 (30,000 - 99,999)	9%
	3 (10,000 - 29,999)	11%
	4 (5,000 - 9,999)	6%
	5 (under 5,000)	37%
Northern Ontario (10%)*		
Community size	1 (100,000+)	13%
	2 (30,000 - 99,999)	32%
	3 (10,000 - 29,999)	6%
	4 (5,000 - 9,999)	8%
	5 (under 5,000)	41%

(*Regional population as a percentage of the total population of Ontario.)

The selection procedure involved selecting all communities from the first three strata and randomly selecting representatives from the remaining strata. Telephone numbers were selected randomly from each of the selected communities in proportion to the size of the stratum in which the community is found and the size of the community.

In the case of multi-person households, respondents aged 15 years and older were screened for random selection using the Troldahl-Carter selection technique, which increases the likelihood of obtaining a sample which matches the population by age and gender.

Following the first wave of interviews, we analyzed the distribution of drivers, cyclists and pedestrians with special emphasis on the number of respondents in each of the driver license classes. The number of drivers in the initial study sample of 753 was augmented through the use of the Ministry's master files. Numbers were selected at random, and a total of 250 calls were completed, forming the second wave of

interviewing.

Weighting of Sample

As previously discussed, the total sample is composed of two subsamples: 753 drawn randomly from the general population, and 250 drawn from Ministry records. The subsample of 753 resulted in a total of 633 licensed respondents, or 84 percent of the sample. The proportion of 84 percent licensed to 16 percent unlicensed was later used as the incidence of licensed drivers among the population of Ontario aged 18 years and over.

The 633 licensed respondents from the general sample were combined with the 250 from Ministry records. The observed percentage distribution of license classes among 883 licensed respondents was then weighted to the target percentage distribution of classes provided by the Ministry.

The following weights were assigned to the various segments of the sample:

SAMPLE WEIGHTING

License Class	Observed %	Target %	Weight.	Lic. Incid. Adj.*	Final Weight
A	4.300	1.31	.305	.954	.291
AM	1.395	.42	.301	.954	.287
AB	.465	.06	.129	.954	.123
AC	1.744	.17	.097	.954	.093
ABM	.233	.02	.086	.954	.082
ACM	1.047	.07	.067	.954	.064
B\BM	5.116	.57	.111	.954	.106
C	2.442	.15	.061	.954	.058
CM	.349	.03	.086	.954	.082
D	5.000	3.03	.606	.954	.578
DM	1.279	.63	.493	.954	.470
DE\DF\DEM\DFM	1.046	.01	.038	.954	.036
E\EM	3.140	.06	.013	.954	.012
F	2.326	.22	.095	.954	.090
FM	.581	.04	.069	.954	.066
G\CH\L	60.930	87.14	1.430	.954	1.364
GM	8.140	5.84	.717	.954	.684
M	.349	.09	.258	.954	.246
Other	2.674	.00	1.000	.954	.954
Unlic.	12.000	\	1.000	1.333	1.333

*Licensed/unlicensed incidence:
from general population sample (n=753), 84:16.
from combined sample (n=1003), 88:12

Adjustment factor:
for licensed sample 84/88 = .954
for unlicensed sample 16/12 = 1.333

Completion Results

In total, 1,003 interviews were completed in the survey. The completion results are as follows:

SURVEY COMPLETION RESULTS

	N	%
Number of Calls	4,794	100
Ineligible	278	6
Not in service	826	17
Sub-total	1,104	23
New Base (4,794 - 1,104)	3,690	100
No answer, line busy	1,124	31
Respondent unavailable	643	17
Language barrier	87	2
Incomplete interview	44	1
Refusal	789	22
Sub-total	2,687	73
Net completions (3,690 - 2,687)	1,003	27

Please note: a minimum of five calls were made to a number before classifying it as a "no answer."

The effective response rate for the survey is 27 percent. This is the number of completed interviews (1,003), divided by the total sample (4,794), minus ineligible numbers (278) and numbers not in service (826).

A sample size of 1,003 would have a margin of error of plus or minus 3.1 percent at the 95 percent confidence level. The initial wave of 753 interviews and the second wave of 250 would have a margin of error of 3.5 percent and 6.1 percent respectively.

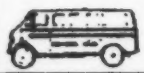
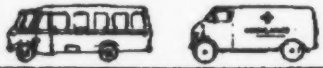
At the conclusion of interviewing, 1,124 telephone numbers remaining in the sample frame had not yet reached a household member. After eliminating these numbers from the sample frame, the completion rate for the survey increases to 39 percent.

APPENDIX 2

ONTARIO CLASSIFIED DRIVER LICENSING SYSTEM

QUICK CHECK CHART

INTENDED AS A GUIDE ONLY
FOR OFFICIAL PURPOSES REFER TO THE ONTARIO HIGHWAY TRAFFIC ACT

CLASS OF LICENCE	TYPES OF VEHICLES ALLOWED	MAY ALSO DRIVE VEHICLES IN CLASS	MEDICAL GRADE CODE	MINIMUM MEDICAL AND AGE REQUIREMENTS FOR CLASS OF LICENCE
A	ANY TRACTOR-TRAILER OR TRUCK-TRAILER COMBINATION	D AND G	2	SAME AS GRADE 1 EXCEPT NO HEARING REQUIREMENT. VISION – ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEAKER EYE HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES IN EACH EYE MINIMUM AGE 16
B	ANY SCHOOL PURPOSES BUS	C, D, E, F AND G	1	HIGHEST MEDICAL REQUIREMENTS. VISION – ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEARER EYE HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES IN EACH EYE. MINIMUM AGE 21
C	ANY REGULAR BUS	D, F AND G	1	–SAME AS ABOVE, EXCEPT MINIMUM AGE IS 18.
D	ANY TRUCK OR COMBINATION PROVIDED THE TOWED VEHICLE IS NOT OVER 4600 kg	G	3	SAME AS GRADE 2 EXCEPT NO HEARING REQUIREMENT AND NO SUBSEQUENT OCCURRENCE OF MYOCARDIAL INFARCTION, OR THROMBOSIS OR REQUIRING ANGINA PECTORIS VISION – ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEAKER EYE HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES IN EACH EYE MINIMUM AGE 18
E	SCHOOL PURPOSES BUS – MAXIMUM OF 24-PASSENGER CAPACITY 	F AND G	1	HIGHEST MEDICAL REQUIREMENTS VISION – ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEAKER EYE HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES IN EACH EYE MINIMUM AGE 21
F	REGULAR BUS MAXIMUM OF 24 PASSENGER CAPACITY AND AMBULANCES 	G	1	–SAME AS ABOVE, EXCEPT MINIMUM AGE IS 18
G	ANY AUTOMOBILE, SMALL TRUCK OR COMBINATION UP TO 11,000 kg PROVIDED THE TOWED VEHICLE IS NOT OVER 4,600 kg		5	MEDICAL REPORTS NOT REQUIRED EXCEPT WHEN MEDICAL CONDITION PRESENT EACH CASE IS INDIVIDUALLY REVIEWED VISION – ACUITY NO POORER THAN 20/40 IN BETTER EYE HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES MINIMUM AGE 16
M	MOTORCYCLES		5	–SAME AS 1 ABOVE.
L	VALID FOR THE OPERATION OF A CLASS G MOTOR VEHICLE WHEN ACCOMPANIED BY A HOLDER OF A VALID CLASS "A, B, C, D, E, F OR G" LICENCE, OCCUPYING A SEAT BESIDE THE "L" LICENCE HOLDER, FOR THE PURPOSE OF GIVING INSTRUCTIONS IN DRIVING THE MOTOR VEHICLE.		5	–SAME AS 5 ABOVE.
R	VALID FOR THE OPERATION OF A MOTORCYCLE, SUBJECT TO THE FOLLOWING CONDITIONS: – VALID FOR ONE HALF HOUR BEFORE SUNRISE TO ONE HALF HOUR AFTER SUNSET – NO PASSENGERS ALLOWED – NOT VALID FOR HIGHWAYS WITH SPEED LIMITS IN EXCESS OF 80 km/h EXCEPT HWYS. 11 & 17		5	–SAME AS ABOVE

NOTE:– ALL CLASSES OF LICENCE AUTHORIZED OPERATION OF A MOTOR-ASSISTED BICYCLE OR MOTORIZED SNOW VEHICLE
– A CLASS F MOTOR VEHICLE, OTHER THAN AN AMBULANCE OR CAR POOL VEHICLE AS DEFINED IN THE PUBLIC VEHICLES ACT, WITH A DESIGNED SEATING CAPACITY FOR NOT MORE THAN ELEVEN PASSENGERS THAT IS USED FOR PERSONAL PURPOSES WITHOUT COMPENSATION SHALL BE DEEMED TO BE A CLASS G MOTOR VEHICLE
– THE HOLDER OF A CLASS M LICENCE MAY OPERATE A CLASS G VEHICLE WHILE RECEIVING INSTRUCTION AND ACCOMPANIED BY A PROPERLY LICENCED DRIVER
– A PERSON MAY HOLD A SECOND DRIVER'S LICENCE ONLY WHEN THE SECOND LICENCE IS A CLASS R MOTORCYCLE LEARNER

THE PERMISSIBLE COMBINATIONS OF LICENCE CLASSES ARE:

AM	BM	CM	DM	EM	FM	GM
AB			DE			
ABM			DEM			
AC			DF			

APPENDIX 3

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Final Draft - **MTO ROAD USERS SURVEY**

Hello, my name is _____ from Environics Research Group. We are conducting an important study about drivers, cyclists and pedestrians for the Ontario Ministry of Transportation.

TROLDAHL-CARTER SELECTION KEY

1 - First, do you currently hold a valid Ontario driver's license?

1 - Yes GO TO Q.2
2 - No GO TO Q.5
3 - Too young to have a license (VOLUNTEERED) GO TO Q.9

2 - What class or classes of licenses do you hold? **DO NOT READ**
CODE ALL THAT APPLY

1 - "A" class (Tractor trailer)
2 - "B" class (School bus)
3 - "C" class (Regular bus)
4 - "D" class (Truck)
5 - "E" class (Small school bus or van)
6 - "F" class (Small bus or van, ambulance)
7 - "G" class (Car, van, small truck up to 11,000 kg)
8 - "M" class (Motorcycles)
9 - "L" class (Learners)
10 - "R" class (Learners for motorcycles)
11 - Chauffeur's license
12 - Other

IF VEHICLE TYPE IS GIVEN IN QUESTION 2 INSTEAD OF CLASS, DO NOT REPEAT IN QUESTION 4

3 - How many years have you been licensed to drive? Is this... **READ**

1 - Less than 2 years
2 - Two to five years
3 - Six to 10 years
4 - Ten to 25 years
5 - More than 25 years

4 - To the best of your knowledge, does your license allow you to drive... **READ AND ROTATE**

A car (Yes/No)
A motorcycle (Yes/No)
A school bus (Yes/No)
A regular bus such as a public transit bus (Yes/No)
A van or camper (Yes/No)
A pick-up truck (Yes/No)
A large truck such as a dump truck
A tractor trailer (Yes/No)
A snowmobile (Yes/No)

GO TO Q.6

5 - Do you have a driver's license from another province, state or country?

1 - Yes GO TO Q.5a
2 - No GO TO Q.8
3 - Too young to have a license (VOLUNTEERED) GO TO Q.9

5a - How long have you lived in Ontario? **READ, CODE ONE ONLY**

1 - Less than 6 months
2 - Between 6 months and a year
3 - Between 1 and 5 years
4 - More than 5 years

6 - About how often would you say that you drive a vehicle? Is this... READ, CODE ONE ONLY

1 - Every day or almost every day
2 - Several times a week
3 - About once or twice a week
4 - Two or three times a month
5 - Once a month or less
6 - Does not drive (VOLUNTEERED) GO TO Q.8

7 - When you drive, what is your usual or most frequent reason for travelling? Is this... READ, CODE ONE ONLY

1 - Going to and from work
2 - Driving as part of your job
3 - Going to and from classes or school
4 - Pleasure trips, recreational activities, visiting family or friends
5 - Shopping or attending to personal business
6 - Other (SPECIFY)_____

GO TO Q.9

8 - Is your driver's license currently suspended or has it expired?

1 - Yes, suspended or expired
2 - No

9 - In the past year, have you ridden a bicycle on a street or road in Ontario along which other vehicles can also travel?

1 - Yes GO TO Q.10
2 - No GO TO Q.13

10 - When the weather permits, about how often do you usually ride a bicycle? Is this... READ, CODE ONE ONLY

1 - Every day or almost every day
2 - Several times a week
3 - About once or twice a week
4 - Two or three times a month
5 - Once a month or less
6 - Does not ride a bicycle (VOLUNTEERED) GO TO Q.13

11 - What is your usual or most frequent reason for riding a bicycle? Is this... READ, CODE ONE ONLY

1 - Going to and from work
2 - Riding a bike as part of your job
3 - Going to and from classes or school
4 - Recreational cycling, exercising or just riding around
5 - Training, racing or touring
6 - Visiting family or friends
7 - Shopping or attending to personal business
8 - Other (SPECIFY)_____

ALL DRIVERS, GO TO Q.14
IF CYCLIST ONLY, GO TO Q.52
IF NEITHER DRIVER NOR CYCLIST, GO TO Q.13

12 - There is no Question 12

13 - How do you usually get around? DO NOT READ, CODE ALL THAT APPLY

1 - Walk
2 - Wheelchair
3 - Public transit
4 - Special transit service for the disabled
5 - Rides from others
6 - Disabled, stays at home, bedridden, homebound
7 - Other (SPECIFY)_____

TERMINATE IF DISABLED, BEDRIDDEN OR HOMEBOUND
PEDESTRIANS, GO TO Q.67

COMMON INTRODUCTION FOR DRIVERS, CYCLISTS AND PEDESTRIANS

The following questions refer to what you think are the correct ways to use roads in Ontario as drivers, cyclists and pedestrians. Although some questions may sound like a test, we are only interested in the level of knowledge among the general public.

DRIVERS ONLY
Now, we are going to ask you about some fairly common driving situations. Even if you don't come across these situations very often, we would like to know what you think you should do.

14 - You are driving down a city street with traffic in both directions. As you approach an intersection with traffic signals, the light turns from green to amber. What should you do? **DO NOT READ, CODE ONE ONLY**

1 - Stop
2 - Stop, if you can do so safely, otherwise proceed with caution
3 - Slow down, proceed with caution
4 - Continue through the intersection, beat the light, speed up
5 - Other (SPECIFY)_____

15 - There is no Question 15.

16 - There is no Question 16.

17 - You are trying to make a left turn at a busy intersection. You are in the middle of the intersection when the light turns amber. Is the oncoming traffic required to stop to let you complete your turn or should you wait for other vehicles to come to a stop first before turning? **DO NOT READ, CODE ONE ONLY**

1 - Oncoming traffic required to stop
2 - You should wait
3 - Neither, both, depends

18 - There is no Question 18.

19 - There is no Question 19.

20 - When a signal light is solid green, who has the right-of-way--pedestrians crossing with the light or motorists making turns? **DO NOT READ, CODE ONE ONLY**

1 - Pedestrians
2 - Motorists
3 - Depends

21 - There is no Question 21.

22 - You are driving down a street or road and there is an intersection with four-way stop signs (stop signs on each corner). Another car is approaching from your right and comes to a stop at the same time as you do. Who should go through the intersection first? You or the car on your right? **DO NOT READ, CODE ONE ONLY**

1 - You
2 - Car on the right
3 - Depends

23 - There is no Question 23.

24 - There is no Question 24.

25 - Now we would like to ask you several questions about driving on freeways in Ontario. These are highways with four or more lanes such as Highways ___ and ___. How often do you drive on freeways? Is this... READ, CODE ONE ONLY

1 - Often
2 - Sometimes
3 - Rarely, or
4 - Never

IF "NEVER" SKIP TO Q.34
IF 1-3, DK/NA CONTINUE TO Q.26

26 - When you are getting on a freeway, how should you merge into freeway traffic. Should you adjust to freeway driving speed in the acceleration lane then merge into freeway traffic or should you merge as quickly as possible into the freeway traffic regardless of your speed? DO NOT READ, CODE ALL THAT APPLY

1 - Adjust speed in acceleration lane
2 - Merge onto highway lanes as quickly as possible
3 - Both, neither, depends

27 - Once you are on the freeway, in which lane should you normally drive? DO NOT READ, CODE ONE ONLY

1 - Left lane
2 - Centre lane
3 - Right lane
4 - None, more than one, depends

28 - There is no Question 28.

29 - What is the general rule of thumb for following a safe distance behind another vehicle? DO NOT READ, CODE ONE ONLY

1 - Two-second gap between vehicles
2 - One vehicle length for every 15 km/hr (10 miles/hr)
3 - Other specified vehicle/car lengths
4 - Other (SPECIFY)_____

30 - There is no Question 30.

31 - There is no Question 31.

32 - There is no Question 32.

33 - There is no Question 33.

34 - Now think about driving on a two-lane road in Ontario that has a speed limit of 80 kilometers an hour — one lane in each direction. There is a slower vehicle directly in front of you.

What painted lane markings indicate that passing is permitted if traffic conditions allow? CODE ALL THAT APPLY

1 - Broken centre line/lane marking
2 - Broken centre line on your side, solid on other
3 - Solid single centre line only
4 - Solid double centre line only
5 - Other (SPECIFY)_____

35 - After you have passed this vehicle but you are still in the left passing lane, how can you tell that it is safe to return to the right lane? DO NOT READ, CODE ALL THAT APPLY

1 - See front of vehicle in rear view mirror
2 - Look over shoulder to see if lane is clear/see other car
3 - Just can tell or knows when safe to return
4 - Other vehicle flashes lights or signals
5 - Other (SPECIFY)_____

36 - At night, what else should you do when passing another vehicle? **DO NOT READ, CODE ALL THAT APPLY**

1 - Switch to low beams when approaching
2 - Switch high beams on and off to warn driver ahead of you
3 - Switch on high beams as you move along side the other vehicle
4 - Nothing
5 - Other (SPECIFY)_____

37 - There is no Question 37.

38 - There is no Question 38.

39 - There is no Question 39.

40 - What should you do to bring your vehicle under control if your wheels leave the pavement and you go on the unpaved shoulder while driving at high speed? **DO NOT READ, CODE ALL THAT APPLY**

1 - Take foot off the accelerator
2 - Do not apply brakes/coast
3 - Apply brakes immediately/hard
4 - Apply brakes gently/slow down
5 - When vehicle has slowed, steer back onto the pavement
6 - Other (SPECIFY)_____

41 - There is no Question 41.

Now we would like to ask you about driving in general in Ontario. This would include driving on city streets, rural roads and on highways.

42 - When you are passing a motorcyclist, should you change lanes or should you pass in the same lane when safe to do so?

1 - Change lanes
2 - Stay in lane/share lane
3 - Neither, both, depends

43 - There is a school bus stopped ahead of you in the same lane as you are driving. Its red lights are flashing. As long as you come to a full stop behind the bus, are you then allowed to pass with extreme caution?

1 - Yes
2 - No
3 - Depends

44 - There is a school bus in the lane on the other side of the road and its red lights are flashing. On what kind of roadway are you allowed to drive by the school bus? **DO NOT READ, CODE ONE ONLY**

1 - There is a median or divider
2 - A freeway, limited access or controlled access highway
3 - None, no situations
4 - Other (SPECIFY) _____

45 - There is no Question 45.

46 - There is no Question 46.

47 - To the best of your knowledge, is every passenger in a car required to wear a seatbelt at all times?

1 - Yes
2 - No
3 - Depends (SPECIFY)_____

48 - When children less than four years old are riding in a car, is it best for them to use regular seatbelts, to use a child safety seat or to sit in the lap of an adult with the adult holding the child securely? **DO NOT READ, CODE ONE ONLY**

1 - Regular seatbelts
2 - Child safety seat (restraint)
3 - Sit with adult
4 - None, more than one, depends

49 - There is no Question 49.

50 - Unless otherwise posted, what is the maximum speed allowed in a city, town or built-up area?

|__|__| Km/hr |__|__| Miles/hr

51a- When are drivers required to have their headlights on? **DO NOT READ, CODE ALL THAT APPLY**

1 - Before sunset until after sunrise
2 - Sunset to sunrise
3 - When streetlights are on
4 - Poor light conditions — fog, snow, rain
5 - To see objects 110 metres away
6 - Other (SPECIFY)_____

51b - If a person were involved in an accident while their license was under suspension and the accident was their fault, would their insurance... **READ, CODE ONE ONLY**

1 - Cover all damages and injuries
2 - Cover only the damages or injuries of others, or
3 - Would their insurance be void altogether
4 - Depends (VOLUNTEERED)

51C - If a person were involved in an accident and were found to be both at fault and drinking, would their insurance... **READ, CODE ONE ONLY**

1 - Cover all damages and injuries
2 - Cover only the damages or injuries of others, or
3 - Would their insurance be void altogether
4 - Depends (VOLUNTEERED)

CYCLIST'S SURVEY

The next questions have to do with riding a bicycle on Ontario's roads. We would like to know what you should do in the following situations.

52 - Do the rules of the road that apply to motorists also apply to cyclists or are cyclists not required to follow these rules because bicycles are not motorized? **DO NOT READ, CODE ONE ONLY**

1 - Required to obey rules of road
2 - Not required to obey rules of road
3 - Both, neither, depends

53 - There is no Question 53.

54 - What position on the roadway should a cyclist normally ride? **READ, CODE ONE ONLY**

1 - To the left or centre of the lane
2 - As close as possible to the right side of the road
3 - On the sidewalk, if there is one
4 - None, more than one, depends (VOLUNTEERED)

55 - When cycling at night or in poor weather conditions, what lighting is a cyclist required to have? **DO NOT READ, CODE ALL THAT APPLY**

1 - White light on front
2 - Red light or reflector on rear
3 - Reflective tape on forks
4 - Other lights or reflectors (pedal or wheel reflectors, arm/leg lights, reflective clothing, etc.)
5 - None
6 - Other (SPECIFY) _____

The next few questions have to do with riding a bicycle through an intersection and making turns at an intersection.

56 - What is the correct hand and arm signal to indicate you are going to make a right turn? **DO NOT READ, CODE ONE ONLY**

1 - Left arm extended, raised at elbow
2 - Left arm extended straight out from body
3 - Left arm pointing down
4 - Right arm extended straight out from body
5 - Other (SPECIFY)_____

57 - What is the correct hand and arm signal to indicate you are going to make a left turn? **DO NOT READ, CODE ONE ONLY**

1 - Left arm extended, raised at elbow
2 - Left arm extended straight out from body
3 - Left arm pointing down
4 - Right arm extended straight out from body
5 - Other (SPECIFY)_____

58 - You are riding up to an intersection with traffic lights and the light turns from green to amber as you approach. Should you... **READ, CODE ONE ONLY**

1 - Proceed through the intersection but pedal faster
2 - Or, should you come to a stop
3 - Depends (VOLUNTEERED)

59 - When the light is red, is a cyclist allowed to ride through the intersection if there is no other traffic and there are no pedestrians?

1 - Yes
2 - No
3 - Depends

60 - Now, think about making a right turn at a red signal or a stop sign. What steps should you take when making a right turn? **DO NOT READ, CODE ALL THAT APPLY**

1 - Get into right side of lane
2 - Come to a complete stop
3 - Signal your intention to turn
4 - Look over your shoulder for overtaking traffic
5 - Check for cross traffic
6 - Check for pedestrians
7 - Cycle through the intersection when clear
8 - Return to the right side of lane when turn completed
9 - Just slow down and keep going
10 - Other (SPECIFY)_____

61 - There is no Question 61.

62 - There is no Question 62.

63 - There is no Question 63.

64 - You are approaching an intersection that does not have traffic lights, stop signs or yield signs. At the same time, there is a car approaching along the cross street. Does the car have the right-of-way when it is approaching from your left or right? **DO NOT READ, CODE ONE ONLY**

1 - Car that is coming from your left
2 - Car that is coming from your right
3 - Car has right-of-way in both situations
4 - Cyclist has right-of-way in both situations
5 - Depends

65 - Sometimes it is easier to cross a busy road by using a pedestrian crossing or crosswalk. Are you allowed to ride your bicycle as long as you ride cautiously or should you get off your bike and walk?

1 - Ride cautiously
2 - Get off and walk
3 - Both, neither, depends

66 - Cars turning right at an intersection present a particularly hazardous situation for cyclists who are riding on the right side of the road. What is the recommended cycling technique to deal with this situation? **DO NOT READ, CODE ALL THAT APPLY**

1 - Ride in the centre of the lane
2 - Stay out of the motorist's blind spot
3 - Follow behind cars rather than riding alongside
5 - Other (Specify) _____

PEDESTRIAN QUESTIONS

Now, we are going to ask you about some fairly common situations in which pedestrians find themselves. Even if you don't come across these situations very often, we would like to know what you think you should do.

67 - There is no Question 67.

68 - The intersection you are approaching does not have "Walk" or "Don't Walk" signals specifically for pedestrians. Does a flashing green signal mean that you can proceed or does it mean that you should wait until the green light stops flashing? **DO NOT READ, CODE ONE ONLY**

1 - Proceed
2 - Wait
3 - Both, neither
4 - Depends (SPECIFY)_____

69 - There is no Question 69.

70 - Where there are no sidewalks alongside a roadway, should you walk/wheel facing the oncoming traffic or should you walk/wheel with the traffic? **DO NOT READ, CODE ONE ONLY**

1 - Face traffic
2 - Walk/wheel with traffic
3 - Both, neither, depends

71a- What steps should you take when crossing a road with no intersections, crosswalks or traffic signals? **DO NOT READ, CODE ALL THAT APPLY**

1 - Choose a location where you can see traffic in both directions
2 - Choose a location where motorists can see you
3 - Cross only if you can get all the way across
4 - Indicate your intention to cross by pointing or signalling
5 - Wait for vehicles to stop
6 - Look both ways
7 - Cross as quickly as possible
8 - Other (SPECIFY)_____

71b- Are motorists required to stop for pedestrians or do pedestrians cross at their own risk in this situation? **DO NOT READ, CODE ONE ONLY**

1 - Motorists required to stop
2 - Pedestrians cross at their own risk
3 - Both, neither, depends

72 - Pedestrian crossings are identified by large X's painted on the roadway and by crosswalk signs. How should you use a pedestrian crossing?

1 - Point to indicate your intention to cross
2 - Wait until traffic in both directions has stopped
3 - Walk/wheel quickly across the intersection
4 - Keep pointing while crossing
5 - Keep watching for traffic that is not going to stop
6 - Other (SPECIFY)_____

DRIVER EDUCATION AND COMMUNICATIONS

73 - Have you ever taken a formal driver education course at either a secondary school or a community college?

1 - Yes
2 - No

74a- Have you ever taken driving lessons from a driving instructor?

1 - Yes
2 - No

IF YES TO Q.74a
74b- Did you also receive classroom instruction as part of your lessons?

1 - Yes
2 - No

IF "NO" TO BOTH Q.74a AND Q.73
75 - Did you learn to drive by taking informal lessons from family members or friends?

1 - Yes
2 - No

IF "NO" TO Q.75
76 - How did you learn how to drive?

_____

FOR QUESTIONS 77 TO 82
EXCLUSIVE DRIVERS, USE "DRIVING"
ALL CYCLISTS WHO DON'T DRIVE, SUBSTITUTE "CYCLING"
FOR 25% OF RESPONDENTS WHO CYCLE AND DRIVE, SUBSTITUTE "CYCLING"
FOR EXCLUSIVE PEDESTRIANS AND FOR 15% OF DRIVERS AND PEDESTRIANS USE "PEDESTRIANS"

ROTATE Q.77 TO Q.81

77 - In the past six months, do you recall seeing any television advertising promoting safe driving/cycling/pedestrian practices? (**INSERT IF DRIVING** "Do not include commercials about drinking and not driving.")

1 - Yes
2 - No

78 - In the past six months, do you recall hearing any radio commercials promoting safe driving/cycling/pedestrian practices? (**INSERT IF DRIVING** "Do not include commercials about drinking and not driving.")

1 - Yes
2 - No

79 - In the past six months, do you recall seeing any advertising in newspapers or magazines promoting safe driving/cycling/pedestrian practices? (**INSERT IF DRIVING** "Do not include advertising about drinking and not driving.")

1 - Yes
2 - No

80a- In the past six months, do you recall seeing any booklets or pamphlets promoting safe driving/cycling/pedestrian practices? (**INSERT IF DRIVING** "Do not include materials about drinking and not driving.")

1 - Yes
2 - No

IF "YES" TO Q.80a

80b - Were any of these materials distributed or produced by the Ontario Ministry of Transportation? **DO NOT READ**

1 - Yes, distributed or produced by MTO
2 - No

81a - In the past six months, do you recall seeing any posters, billboards or public transit advertising promoting safe driving/cycling practices? (**INSERT IF DRIVING** "Do not include advertising about drinking and not driving.")

1 - Yes
2 - No

IF "YES" TO Q.81a

81b - Were any of these materials produced or sponsored by the Ontario Ministry of Transportation? **DO NOT READ**

1 - Yes, produced or sponsored by MTO
2 - No

SKIP Q.83 IF PEDESTRIAN

82 - If you wanted to get information or advice about improving your driving/cycling skills, where or to whom would you turn? **DO NOT READ, CODE ALL THAT APPLY**

1 - Family, friends, advice from others
2 - Driving school, driver education courses
3 - Ministry of Transportation
4 - Television, radio, newspapers, magazines
5 - Books, booklets, pamphlets on driving/cycling
6 - Library
7 - Police
8 - CAA, OML, other motor club
9 - Ontario/Canadian Cycling Association, local cycling club
10 - Other (SPECIFY)_____

DEMOGRAPHIC QUESTIONS

And now, so we can compare the answers of different groups of people, we would like to ask you a few questions about you and your household. Please be assured that whatever you say will be kept entirely anonymous and absolutely confidential.

83 - Which of the following age categories applies to you? **READ, CODE ONE ONLY**

1 - 15 to 24
2 - 25 to 34
3 - 35 to 44
4 - 45 to 54
5 - 55 to 64
6 - 65 to 80
7 - 80 and older

84 - Are you now... **READ, CODE ONE ONLY**

1 - Working full-time
2 - Working part-time
3 - Going to school and not working
4 - A homemaker (not paid)
5 - Unemployed
6 - Laid off
7 - Unable to work because you are disabled
8 - Retired

ALL RESPONDENTS EXCEPT STUDENTS WHO DON'T WORK

85 - Are you attending school full-time, part-time or do you not attend school? Part-time courses include evening classes, continuing education courses and adult education courses.

1 - Full-time
2 - Part-time
3 - Does not attend

WORKING FULL- OR PART-TIME

86 - What kind of work do you do? DO NOT READ

1 - Sales or clerical (secretary, clerk, bookkeeper, bank teller, salesperson)
2 - Professional or technical (doctor, lawyer, engineer, teacher, clergy, librarian)
3 - Operative (operate some kind of machinery, e.g. truck or cab driver, welder, dress cutter, parking attendant)
4 - Laborer (construction worker, longshoreman, warehouse worker)
5 - Manager or administrator (executive, store manager, farm manager, government administrator)
6 - Craft or skilled worker (carpenter, electrician, radio/TV technician, auto mechanic, baker, factory supervisor)
7 - Service worker (barber, beautician, police officer, cook, housekeeper, practical nurse)
8 - Self-employed
9 - Other (SPECIFY) _____

87 - There is no Question 87.

88 - What is the highest level of education that you have reached? DO NOT READ, CODE ONE ONLY

1 - Elementary school
2 - Some high school
3 - Completed high school
4 - Community college, vocational, technical school, CEGEP
5 - Some university
6 - Completed university
7 - Post graduate, professional
8 - No schooling

89 - What is your marital status? Are you ... READ, CODE ONE ONLY

1 - Single, never married
2 - Married or living together as a couple
3 - Widowed
4 - Separated, or
5 - Divorced

90 - Are there any children living in your household?

1 - Yes
2 - No GO TO Q.92

91 - Are they _____ age? READ

1 - Pre-school
2 - Public school
3 - High school
4 - College or university

92 - There is no Question 92.

93 - What language do you usually speak in your home?

1 - English
2 - Chinese
3 - French
4 - Greek
5 - Italian
6 - Portuguese
7 - Spanish
8 - Other (SPECIFY) _____

94 - For statistical purposes only, we need information about your income. All individual responses will be kept confidential. Please tell me which category applies to your **total household** income for this year?

1 - Under $20,000
2 - $20,000 to $30,000
3 - $30,000 to $40,000
4 - $40,000 to $50,000
5 - $50,000 to $75,000
6 - More than $75,000

95 - Region

96 - Community size

97 - Gender

98 - Do you wish to have additional information sent to you about Ontario's laws and regulations relating to drivers, cyclists or pedestrians?

1 - Yes
2 - No

IF YES TO Q.98
99 - Please give me you name and address.

Name _____
Address _____
City _____
Postal Code _____

99 - If respondent has any other questions about this survey, contact person is :

Heather Clarke
Ministry of Transportation
(416) 235-3635